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CATALOG

—OF—

The Clemson Agricultural College

Of South Carolina

STATE AGRICULTURAL AND MECHANICAL COLLEGE

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RECORD OF EIGHTEENTH YEAR

1910-1911

—AND—

ANNOUNCEMENTS FOR 1911-1912

Printed at
CLEMSON COLLEGE PRINTERY
Clemson College, S. C., 1911.

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1910-1913

1911

JULY

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1912

JANUARY

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COLLEGE CALENDAR

Session 1911-1912

1911	
Sept. 13.	Opening of the 19th session; exercises begin at 8:40 A. M.
Sept. 14.	Examinations for admission and for removal of conditions.
Nov. 23.	Thanksgiving: a holiday.
Dec. 22.	First day of Christmas recess.
1912.	
Jan. 3.	Beginning of the Second Term, 8:40 a. m.
Jan. 19.	Lee's birthday; annual public exercises of the Columbian Literary Society in the evening.
Feb. 22.	Washington's Birthday; a holiday. Annual Public Exercises of the Palmetto Literary Society in the evening.
Feb. 27.	Stated meeting of the Board of Trustees.
Mar. 18.	Calhoun's Birthday: a holiday.
Mar. 24.	Annual Public Exercises of the Calhoun Literary Society in the evening.
1912.	
Mar. 25.	Beginning of the Third Term, 8:40 a. m.
June 9.	Beginning of commencement exercises; baccalaureate sermon.
June 10.	Address of alumni orator. Contest of literary society representatives. Military exercises.
June 11.	Commencement Day; address to the graduating class. Graduating exercises; delivery of diplomas.
July 9.	Stated meeting of the Board of Trustees.

Reports to Parents.

Reports of class standing and discipline will be sent to parents for periods ending on the following dates:

October 28, and December 16,* 1911; February 10, March 17,* April 28, and June 2,* 1912.

Dates marked with asterisk (*) are approximate, depeding upon the beginning of the respective term examinations.

Quarterly Dues.

Payable September 13, November 15, 1911; January 17, March 21, 1912.

17485

BOARD OF TRUSTEES.

Life Members.

HON. ALAN JOHNSTONE, President .. Newberry, Newberry Co.
HON. R. W. SIMPSON .... Pendleton, Anderson Co.
SENATOR B. R. TILLMAN .... Trenton, Edgefield Co.
HON. M. L. DONALDSON .... Greenville, Greenville Co.
HON. J. E. WANNAMAKER .... St. Matthews, Calhoun Co.
HON. W. W. BRADLEY .... Abbeville, Abbeville Co.
HON. R. I. MANNING .... Sumter, Sumter Co.

Term Expires. 1912.

E. T. HUGHES, ... Marion, Marion Co.
HON. JNO. G. RICHARDS, JR., ... Liberty Hill, Kershaw Co.
HON. COKE D. MANN .... West Union, Oconee Co.

Term Expires 1914.

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HON. B. H. RAWL .... Lexington, Lexington Co.
HON. IVY M. MAULDIN .... Pickens, Pickens Co.

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Finance Committee

Messrs. Simpson, Donaldson, Mauldin, Bradley, Manning.

Agricultural Committee

Messrs. Tillman, Wannamaker, Manning, Evans, Rawl.

Fertilizer Committee.

Messrs. Evans, Manning, Richards.

Entomological Committee.

Messrs. Evans, Richards, Hughes.

Veterinary Committee.

Messrs. Evans, Richards, Hughes.

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*The President of the Board, Hon. Alan Johnstone, is ex officio a member of all committees.

Board of Visitors for Sessions 1911-'12: 1912-'13

Meeting First Wednesday in May

First District—Hon. Samuel G. Stoney, Charleston, S. C.

Second District—Dr. T. B. Whatley, Gillisonville, S. C.

Third District.—Hon. W. N. Graydon, Abbeville, S. C.

Fourth District—Hon. J. O. Wingo, Campobello, S. C.

Fifth District—Hon. J. H. Foster, Lancaster, S. C.

Sixth District—Hon. A. J. A. Perritt, Lamar, S. C.

Seventh District—Hon. A. F. Lever, Peak, S. C.

ADMINISTRATIVE OFFICERS AND EMPLOYEES

WALTER MERRITT RIGGS, B. S., E. M. E., LL. D.
President

PAUL HAMILTON EARLE SLOAN, M. D.
Treasurer and Secretary Board of Trustees

MARCUS BUTLER STOKES
Captain 10th Infantry, U. S. Army
Commandant

ALEXANDER MAY REDFERN, B. S., M. D.
Surgeon

MISS KATHERINE BOCQUET TRESCOT
Librarian

MISS ANNE ALLSTON PORCHER
Assistant Librarian

HUGH MILTON STACKHOUSE
Secretary Board of Fertilizer Control

JOHN NATHAN HOOK
Justice Clemson College Corporation

AUGUST SCHILLETTER
Steward

JAMES PERCIVAL LEWIS
Superintendent of College Farm

WILLIAM CALVIN TUCKER*
Bookkeeper

SAMUEL WILDS EVANS**
Bookkeeper

FLOYD LANDON CARROLL†
Assistant Bookkeeper

W. P. WHITE
Registrar

MISS MARGARET L. SADLER
Secretary to the President

MISS MARGARET E. GASQUE
Assistant to Secretary Board of Fertilizer Control

MISS ETTA M. SADLER
Stenographer to Agricultural Department

JOHN McMILLAN GASQUE††
Assistant to Commandant

JAMES GRIFFIN HILTON§
Assistant to Commandant

JOSEPH HEWER
Superintendent of Construction and Repairs

JOSEPH JAMES HINEKER
Sergeant U. S. Army (retired)
Quartermaster Sergeant

---

*Resigned March 15, 1911. **Assistant Bookkeeper until March 15, 1911. †After March 20, 1911. ††Resigned March 1, 1911. §After March 15, 1911.

OFFICERS OF INSTRUCTION*

WALTER MERRITT RIGGS, B. S., E. M. E., L L. D.
President

Agricultural Department

WILLIAM ROBERT PERKINS, M. S.
Director of Department
Professor of Agronomy

FRED HARVEY HALL CALHOUN, Ph. D
Professor of Geology and Mineralogy

M. RAY POWERS, D. V. S.
Associate Professor of Veterinary Science

ARCHIBALD SMITH
Head of Animal Husbandry Division
Associate Professor of Animal Husbandry and Dairying

DAVID OLIVER NOURSE, B. S.
Associate Professor of Animal Husbandry and Dairying

HOMER C. THOMPSON, B. S.
Associate Professor of Horticulture

JOHN GALENTINE HALL, M. A.
Associate Professor of Botany and Forestry

ALBERT FREDERIC CONRADI, B. S. A.
Associate Professor of Entomology and Bacteriology

JUNIUS MILTON BURGESS, B. S.
Assistant Professor of Animal Husbandry and Dairying

JOHN McGUIRE NAPIER, M. S.
Assistant Professor of Agronomy

WILSON P. GEE, M. S.
Assistant Professor of Entomology

ROBERT OLIVER FEELEY, D. V. S.
Assistant in Veterinary Science

ARTHUR BALLARD MASSEY, B. S.
Instructor in Bacteriology

GUY CHESTER CRAMPTON, Ph. D.**
Assistant in Entomology

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*The names of the Officers of Instruction are arranged in groups in each department—Professors, Associate Professors, Assistant Professors, and Instructors.

**Resigned April 1, 1911.

Engineering Department

SAMUEL BROADUS EARLE, A. M., M. E.
Vice Director of Department
Associate Professor of Mechanical Engineering

HALE HOUSTON, C. E.
Professor of Civil Engineering

THOMAS GRAYSON POATS, M. E., E. E.
Associate Professor of Physics

RUDOLPH EDWARD LEE, B. S.
Associate Professor of Drawing

WILSON WIGHTMAN KLUGH, B. S
Assistant Professor of Drawing

FRANK TOWNES DARGAN, M. S.
Assistant Professor of Electrical Engineering

JOHN WEEMS GANTT
Assistant Professor of Forge and Foundry Work

STYLES TRENTON HOWARD, B. M. E.
Assistant Professor of Machine Work

ANDREW BURCHELL GARDNER
Assistant Professor of Woodwork

JOHN FRANKLIN ALLISON, B. S.
Instructor in Forge and Foundry Work

JAMES CORCORAN LITTLEJOHN, B. S.
Assistant in Mechanical and Electrical Engineering

FRANCIS RAYMOND SWEENEY, B. S.
Instructor in Civil Engineering

GEORGE HAMILTON FOLK, B. S.
Instructor in Woodwork

MAHLON THOMAS BIRCH, B. S.
Instructor in Drawing

DAVID NIVIN HARRIS, B. S.
Instructor in Drawing

Department of Chemistry

RICHARD NEWMAN BRACKETT, A. B., Ph. D.
Acting Director of Department
Acting Professor of Chemistry

MARK BERNARD HARDIN
Professor of Chemistry, Emeritus

DAVID HILL HENRY, B. S.
Acting Associate Professor of Chemistry

GUY FLEMING LIPSCOMB, B. S.
Assistant Professor of Chemistry

D. J. McADAM, Jr., Ph. D.*
Assistant Professor of Chemistry

HERBERT J. SMITH, B. S. **
Assistant Professor of Chemistry

BENJAMIN FREEMAN, B. S.
Assistant in Chemistry

Department of Textile Industry

CHARLES STEBBINS DOGGETT
Director of Department
Professor of Textile Chemistry and Dyeing

CLAUDE WIGHTMAN McSWAIN, B. S.
Assistant Professor of Weaving and Designing

FRED TAYLOR
Assistant Professor of Carding and Spinning

Academic Department

CHARLES MANNING FURMAN, A. B.
Professor of English

WILLIAM SHANNON MORRISON, A. B.
Professor of History and Political Economy

SAMUEL MANER MARTIN, B. S.
Professor of Mathematics

DAVID WISTAR DANIEL, M. A.
Associate Professor of English

---

*Resigned Dec. 1910. **Appointed Feb. 1911.

AUGUSTUS G. SHANKLIN, B. S.
Associate Professor of Mathematics

THOMAS WADLINGTON KEITT
Assistant Professor of English

ARTHUR BUIST BRYAN, B. S., B. Litt.
Assistant Professor of English

JOSEPH EVERETT HUNTER, B. S.
Assistant Professor of Mathematics

MARK EDWARD BRADLEY, A. B.
Assistant Professor of English

BURR HARRISON JOHNSTONE, A. B.
Assistant Professor of Mathematics

ANDREW BRAMLETT, B. S.
Assistant Professor of Mathematics

ALESTER GARDEN HOLMES, B. S.
Assistant Professor of History

Military Department

MARCUS BUTLER STOKES
Captain 10th Infantry, U. S. A., Commandant of Cadets
Professor of Military Science and Tactics

Preparatory Class

LAWRENCE ANDREW SEASE, B. S.
Headmaster of Preparatory Class
Assistant Professor of English

BENJAMIN JOHNSTON WELLS, L. I., A. B.
Instructor Preparatory Class

STANDING COMMITTEES TO THE PRESIDENT

The President is ex-officio a member of each committee.
The first named in each instance is chairman.

Re-Examinations and Promotions

Martin; Brackett, Dargan, Doggett, Earle, Furman, Houston, Littlejohn, Morrison, Perkins

Entrance Requirements

Furman; Calhoun, Littlejohn, Martin, Morrison, Perkins, Sease

Schedule

Morrison; Brackett, Bramlett, Keitt, T. W., Lee, McSwain, Poats, Powers

Extension Work

Barrow; Barre, Barnett, Daniel, Doggett, Harper, Lee, Napier, Smith, A., Stackhouse

Library

Bryan; Calhoun, Earle, Henry, Keitt, T. E., Taylor

Irregular Students

Hunter; Klugh, Lipscomb, Napier, Poats

Catalogue

Doggett; Barre, Brackett, Bryan, Howard, Littlejohn, Powers

Student Recreation

Henry; Calhoun, Holmes, Houston, Lipscomb, Stokes

Athletics

Calhoun; Gantt, Johnstone, Poats, Shanklin

Student Publications

Keitt, T. W.; Bradley, Holmes

Religious Services

Earle; Bradley, Burgess, Holmes, Wells

Chapel Music

Daniel; McSwain, Taylor

Chapel Entertainments

Daniel; Houston, Johnstone, Martin, Powers

State Fair

Howard; Burgess, Conradi, Napier, McSwain, Stokes

Campus

Houston; Hall, Harper, Newman, Sweeney

Reception

Harper; Barrow, Brackett, Daniel, Perkins, Stackhouse, Stokes

Alumni

Lee; Bryan, Burgess, Henry, Klugh

Museum Committee

Calhoun; Barre, Gee, Hall, Napier

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Station Staff

JOSEPH NELSON HARPER, B. S., M. S. A.
Director and Agriculturist

CHARLES CARTER NEWMAN, B. S.
Horticulturist

HENRY WALTER BARRE, M. S.
Botanist and Plant Pathologist

ALBERT FREDERIC CONRADI, B. S. A., M. S.
Entomologist and Zoologist

THOMAS ELLISON KEITT, B. S.
Chemist

ENOCH BARNETT, D. V. M.
Veterinarian and Animal Husbandman

W. A. THOMAS, B. S.
Field Pathologist

L. P. BYARS, B. S.
Assistant in Field Pathology

JOHN NATHAN HOOK
Secretary and Librarian

WILLIAM D. GARRISON, B. S.
Superintendent Coast Land Experiment Station

MISS HELEN C. BRADFORD
Stenographer

BURNS GILLISON
Foreman Experiment Station Farm

Division of Extension Work and Farmers' Institutes

Agricultural Department

DAVID NICHOLAS BARROW, B. S.
Superintendent

CHRISTOPHER BRADSHAW HADDON, B. S.
Assistant in Rural School Agriculture

WILLIAM H. MORGAN, B. S.*
U. S. Department of Agriculture
Assistant in Dairy Husbandry

---

*Resigned, Nov. 1910.

Chemists of Fertilizer Control

R. N. BRACKETT, Acting Chief Chemist
B. F. ROBERTSON, B. S. Chemist
J. H. MITCHELL, M. S., Assistant Chemist*
C. V. W. CORNELL, B. S., Assistant Chemist.
CHARLES W. RICE, B. S. Assistant Chemist
JAMES EDWIN TOOMER, B. S., Assistant Chemist**

State Control Officers†

Dr. R. N. BRACKETT, Acting State Chemist
A. F. CONRADI, State Entomologist
DR. M. RAY POWERS, State Veterinarian.
DR. R. O. FEELEY, Assistant Veterinarian.

MINISTERS FOR SESSION 1910-1911

Resident Ministers

Baptist	Rev. T. V. McCaul
Episcopal	Rev. L. E. Hubard
Methodist	Rev. M. B. Kelly
Presbyterian	Rev. W. H. Mills

Visiting Ministers

Lutheran	Rev. S. C. Ballentine, Oct. 30, 1910
Lutheran	Rev. E. H. Kohn, Jan. 29, 1911
A. R. P.	Rev. J. S. Moffatt, April 30, 1911

Baccalaureate Sermon

Pres. J. Henry Harms, D. D., Newberry College,
Newberry, S. C.

Commencement Address

Pres. Jas. K. Patterson, Ph. D., LL. D., F. S. A.
State University of Kentucky, Louisville, Ky.

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*Absent on leave. **Substitute for Mr. Mitchell. †Appointed by the Board of Trustees under the State Laws requiring them to carry on the work indicated.

REGIMENTAL ORGANIZATION

1910-'11.

Commandant of Cadets

CAPTAIN M. B. STOKES

Tenth Infantry, United States Army

REGIMENTAL STAFF

Jos. E. Jenkins	Captain and Adjutant
J. A. Dew	Captain and Quartermaster

NON-COMMISSIONED STAFF

J. E. M. Mitchell	Sergeant-Major
H. T. Prosser	Quartermaster Sergeant
H. F. Rivers	Color Sergeant
J. T. Lazar	Color Sergeant

FIRST BATALLION

MAJOR E. S. JENKINS

O. O. Dukes	Adjutant
T. C. Redfern	Sergeant-Major

Co. A.	**Co. B.**	**Co. C.**	**Co. D.**
CAPTAINS			
J. T. Crawford	J. K. Lawton	M. H. Epps	S. L. Britt
LIEUTENANTS			
W. M. Wiggins	Jno. E. Jenkins	L. S. Lindler	B. P. Folk
G. D. Garner	W. B. Gettys	T. D. Williams	C. R. Gilliam
1ST SERGEANTS			
W. R. Gray	E. W. Tison	M. L. Hamer	A. P. Fant
SERGEANTS			
A. J. Brown	J. N. Striblitg	R. F. Ulmer	L. S. David
J. H. Gage	D. T. Hardin	J. A. Bates	E. D. Mays
H. S. Covington	J. M. Dreher	C. H. Stanton	A. G. Small
B. J. Truesdale	S. A. Miller	J. R. Crawford	T. S. Evans
CORPORALS			
S. W. Rabb	M. Coles	E. P. Steele	J. N. Todd
C. K. Dunlap	M. S. Lawton	W. H. Martin	J. M. Wilson
R. F. Davis	W. L. Smarr	L. H. Massey	C. S. Patrick
W. D. Banks	C. J. King	J. Epps	H. G. Rogers
W. B. Britt	J. N. Webb	D. H. Covington	W. E. Morrison

SECOND BATALLION

MAJOR G. C. FURTICK

A. M. Salley	Adjutant
E. G. Littlejohn	Sergeant-Major

Co. E.	Co. F.	Co. G.	Co. H.

CAPTAINS

F. E. Schroder	L. B. Altman	G. E. Lachicatte	E. I. Davis

LIEUTENANTS

C. S. Lykes	F. O. McCown	F. M. Rast	W. C. Garrett
G. L. McCord	J. A. Goodwin	J. E. Kirby	H. P. Cooper

1ST SERGEANTS

O. Jacobs	J. A. Simpson	J. E. Wakefield	J. M. Workman

SERGEANTS

W. H. Privette	C. M. Hall	F. Adams	N. K. Rowell
E. P. Josey	W. D. Ezell	E. E. Hamlin	M. L. Cooper
J. F. Ezell	W. S. Becker	B. R. Bacot	H. A. Adams
L. F. Yates	W. M. Byrd	D. L. Latimer	S. M. Connor

CORPORALS

P. E. Myers	T. F. Davis	J. W. Barnwell	T. F. Massey
F. H. Robertson	A. H. Jackson	J. C. Culler	G. H. Pearce
S. Y. Tupper	J. A. McGill	J. Y. Scruggs	W. H. Frampton
E. B. McLaurin	J. W. McLure	A. J. Evans	F. H. Lathrop
J. C. Fitzsimmons	H. G. Boyleston	A. H. Lachicotte	E. M. Byrd

THIRD BATALLION

MAJOR J. B. KEITH

F. H. All . . . . Adjutant
A. B. Evans . . . . Sergeant-Major

Co. I.	Co. K.	Co. L.	Co. M.

CAPTAINS

W. R. Connelly	F. H. Jeter	W. N. Henderson	L. D. Boone

LIEUTENANTS

L. C. Harrison	O. P. McCord	J. C. Milling	J. M. Martin
J. S. Knox	F. E. Rogers	E. L. Sumner	G. C. Fant

1ST SERGEANTS

W. H. Rentz	J. C. Caldwell	T. C. Adams	H. M. Hutson

SERGEANTS

R. B. Galphin	H. S. Kenrerly	T. E, Bell	G. H. Zerbst
H. W. Harvey	G. L. Hardy	J. R. W. Lindler	D. McIntyre
O. B. Brodie	A. K. Goldfinch	L. C. Gilstrap	C. B. Faris
T. Perry	D. B. Hill	H. C. Jennings	O. F. McCrary

CORPORALS

J. O. Erwin	T. C. Gentry	J. H. Kangeter	A. C. Turbeville
R. Robison	D. L. Cannon	S. K. Brown	L. D. Hutson
C. P. Youmans	A. D. Park	S. E. Harrison	A. P. Gandy.
R. A. Alexander	F. W. Bouson	W. T. Kyzer	L. R. Blackmon
J. L. Hiers	P. M. Carpenter	J. L. Seal	J. K. Boggs

CADET BAND

R. S. Wolfe	1st Lieut. and Chief Musician
J. W. Blackwell	Drum Major

W. D. Bryant	Solo Bb Cornet
C. Baker	First Bb Cornet
J. A. Merritt	Second Bb Cornet
R. S. Wolfe	Solo Bb Clarinet
R. B. Waters	First Bb Clarinet
E. E. Poag,	Piccolo
E. A. McCreary	Baritone
L. F. Wolfe	First Trombone
H. L. Smith	First Eb Alto
M. Coles	Second Eb Alto
J. R. Lomax	Eb Bass
H. S. Davis	Snare Drum
P. L. Bissell	Bass Drum
D. C. Beaty	Cymbals

HISTORICAL SKETCH

Thomas G. Clemson, after whom the College is named, was born in Philadelphia in April, 1807, and died at the Fort Hill home April 6, 1888.

In 1823, then scarcely 16 years old, he ran away from home, and after spending some time in England, went to Paris, where he took up arms in the revolutions of that time. His gallantry brought him recognition and the friendship of prominent men, resulting in his being given a course in the celebrated School of Mines in Paris. In this school he remained for four years, graduating with high honors.

While he was in Europe, his father died, leaving nothing to him in his will. Soon after this, he returned to America and establishing himself in Washington, practiced his profession of Mining Engineer, and accumulated a comfortable fortune. It was here that he met Miss Anna Marie, the eldest daughter of John C. Calhoun, and married her. Two children resulted from this union—a daughter Floride, who afterwards became Mrs. Gideon Lee, of New York, and a son, John Calhoun Clemson.

Mr. Clemson was a strong advocate of the political doctrine of Mr. Calhoun, and when the war broke out, fearing arrest, he and his son escaped by night in a boat, and walking to Richmond, offered their services to President Davis. Mr. Clemson was assigned to the Trans-Mississippi Nitre Mining Department, where he served until the end of the war. His son was appointed a Lieutenant and assigned to active duty.

At the end of the war, Mr. Clemson with his family came to Pendleton and resided with Mrs. John C. Calhoun until her death in 1866.

Mr. Clemson was interested as far back as this date in the establishment of an Agricultural and Industrial College. In November, 1866, a Committee was appointed, consisting of Hon. Thomas G. Clemson, Hon. R. F. Simpson and Col. W. A. Hayne, to appeal to their fellow citizens for "Aid to found an institution for educating our people in the Sciences, to the end that our Agriculture may be improved, our worn and improvised soils be recuperated, and the great natural resources of the South be developed."

In January 1867, at a meeting of the Pendleton Farmers' Society, Mr. Clemson addressed the body in "an able and most interesting and instructional discourse," and submitted in the form of a circular the appeal above referred to. The circular was written by Mr. W. H. Trescot, and closes with the words:

> "Letters and contributions to be directed to the Hon. Thos. G. Clemson, LL. D., Chairman of the Committee, Pendleton, Anderson District, South Carolina."

Again in the minutes of the same Society, of which he was elected President in 1868, under date of Oct. 14, 1869, we find the following:

> "The President, (Mr. Clemson), entertained the Society for half an hour on the subject of Scientific Agriculture, and the Importance of Scientific Agricultural Education."

These citations indicate an early interest on the part of Mr. Clemson in the great cause to which he later devoted his estate.

Previous to the war, Mrs. John C. Calhoun had sold the Fort Hill place and negroes to her son. Col. Andrew P. Calhoun, taking in payment his bond and mortgage for $40,000. At her death, she left a will, which resulted in her daughter Mrs. Clemson, getting three-fourths of the value of this bond and mortgage, and her granddaughter, who at the time of Mrs. Calhoun's death was Mrs. Gideon Lee of New York, the remaining one-fourth.

Shortly after Mrs. Calhoun's death, which was followed by the death of Col. A. P. Calhoun, Mrs. Thomas G. Clemson, after considerable costly litigation foreclosed the mortgage on the Fort Hill place, and at the sale of property in Walhalla in January 1872, Mr. Clemson, as Trustee for his wife and daughter, bid it in for $15,000*, and he himself paid out of his private funds $8,000 to cover lawyer's fees, court cost, etc.

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*See Title Book Oconee County, P. 177-f.

In 1871, Mr. Clemson's daughter, then Mrs. Lee, died, and seventeen days after, his only son, John Calhoun Clemson, was killed in a railroad accident at Seneca. Left childless, Mrs. Clemson willed to her husband, Thomas G. Clemson, all of her estate "absolutely and in fee simple."*

Mr. Clemson, in his will, left to his granddaughter, Floride Isabella Lee, $15,000 to free the property, which by the same will was donated to the State, from any claim in equity that the granddaughter might have. This was, of course, in addition to the one-fourth of the estate which descended to Miss Lee from her mother, who acquired it under the terms of the original will of Mrs. Calhun, and additional to the $8,000 paid out by Mr. Clemson for fees, court costs, etc., when the entire estate was bought in.

Neither by intention, nor by donation, nor by any form of hereditary transmission does it anywhere appear that John C. Calhoun had anything to do with the founding of the College which bears Clemson's name.

In 1875 Mrs. Clemson died, and on April 6, 1888, Mr. Clemson followed her to the grave, and was buried in the Episcopal church yard at Pendleton.

Mr. Clemson's will was bitterly contested by the Lee family, but was finally fully sustained by the Supreme Court. After the settlement of the will, the Trustees of the College bought from Miss Floride Isabella Lee her one-fourth of the estate which adjoined the tract given to the State by Mr. Clemson.

The following extracts are made from Mr. Clemson's will** in order to show clearly his purpose in offering his property to the State for the founding of the Clemson Agricultural College.

* * * * "Feeling a great sympathy for the farmers of this State, and the difficulties with which they have to contend in their

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*See Judge of Probate's Office, Oconee Co., Apartment 26, Package 287. ** See Judge of Probate's Office, Oconee Co., Apartment 64, Package 671.

efforts to establish the business of agriculture upon a proper basis, and believeing that there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill Place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education, and should be a high seminary of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. But I desire to state plainly, that I wish the Trustees of said institution to have full authority and power to regulate all matters pertaining to said institution, * * * * but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agriculture and mechanical industries." * * * *

"I therefore give * * * * the aforesaid Fort Hill place where I now reside, formerly the house of my father-in-law, John C. Calhoun, consisting of eight hundred and fourteen acres, more or less, in trust that whenever the State of South Carolina may accept said property as a donation from me, for the purpose of thereupon founding an Agricultural College, in accordance with the views I have hereinbefore expressed, (of which the chief justice of South Carolina shall be the Judge,) then my executor shall execute a deed of the said property to said State and turn over to the same all property hereinafter given as an endowment of said institution, to be held as such by the said State so long as it in good faith devotes said property to the purpose of the donation." * * * *

"The following named gentlemen, seven in number, shall be seven of the Board of Trustees, to wit R. W. Simpson, D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker and J. E. Bradley; and the State, if it accepts the donation, shall never increase the Board of Trustees to a number greater than thirteen in all, nor shall the duties of said Board be taken away or conferred upon any other men or body of men. The seven Trustees appointed by me, shall always have the right, and the power is hereby given them and their successors, which right the Legislature shall never take away or abridge, to fill all vacancies which may occur in their number by death, resignation, refusal to act, or otherwise. But the Legislature may provide as it sees proper for the appointment or election of the other six Trustees, if it accepts the donation * * * * The name of this Institution is to be "The Clemson Agricultural College of South Carolina."

In the codicil to his will, Item, 12, occurs the following significiant statement:

"The desire to establish such a school or College as I have provided for in my said last will and testament, has existed with me for many years past, and many years ago I determined to devote the bulk of my property to the establishment of an Agricultural School or College. To accomplish this purpose is now the one great desire of my life."

In November 1889, the General Assembly of South Carolina passed the necessary acts authorizing the acceptance of the terms of Mr. Clemson's will, and the establishment of the College. The following extracts are taken from the State laws relating to the College:

Section 1300: "The Honorable Thomas G. Clemson having departed this life on the sixth day of April, A. D. 1888, leaving of force his last will and testament * * * * wherein he devised and bequeathed the Fort Hill plantation, as well as all his other property, both real and personal, except certain legacies in the said will mentioned and provided for, all in trust to convey to the State of South Carolina when the said State shall accept the same for the purpose of establishing and maintaining an Agricultural and Mechanical College upon the aforesaid Fort Hill plantation upon the terms and conditions of said will, **the State of South Carolina hereby expressly declares that it accepts the devise and bequest of Thomas G. Clemson, subject to the terms and conditions set forth in his last will and testament.."** * * * *

"Section 1302. The said College shall be under the management and control of a Board of Thirteen Trustees composed of the seven members nominated by said will and their successors and six members to be elected by the Legislature in Joint Assembly."

"Section 1304. That it shall require a two-thirds vote of said Board of Trustees to authorize the expenditure of any moneys appropriated to said College by the State, or to authorize the sale or transfer or re-investment of any property or moneys arising from the sale of any property under the provisions of this Act."

"Section 1319. All the privilege tax on fertilizers heretofore required to be paid to the Commissioner of Agriculture shall in the future be paid to the Treasurer of the State, subject to the order of the Board of Trustees of the Clemson Agricultural College of South Carolina; and so much of the money so received as shall be necessary to defray the expenses of the Board in performing the duties now by this Act devolved upon them shall be thus used, and the balance shall go to the said College, for its erection and maintenance."

It will be seen from the above extracts that the State accepted in good faith the terms of Mr. Clemson's will, a feature of which was the maintenance of the College, and recognition of the self-perpetuating life membership appointed by Mr. Clemson.

One of the early official acts of the Board was the passage of a rule that nine votes be required not only to appropriate money, as required by the State Law, but to elect any officer of the College as well. This rule was adopted that there might be no just criticism of domination by the Life Trustees.

HISTORY OF THE COLLEGE

The College was opened in July, 1893, with an enrollment of 446 students. The session extended from the third Thursday in February to the third Thursday in December, with the idea of giving all students in Agriculture an opportunity to be instructed in the practical phases of that subject during the crop growing season.

On the night of May 22, 1894, the main College building was burned, but the regular work continued, and the building was promptly re-built.

The first graduating exercises were held in December 1896, the graduating class numbering thirty-seven,—fifteen in the Agricultural Courses, and twenty-two in the Engineering Courses. In the fall of 1897, the session was changed to begin the second Wednesday in September and close the second Wednesday in June, as it had been found inadvisable to operate the College through the hot summer months. The exercises of the second commencement, which would normally have occurred in December, 1897, were held Feb. 6 to 9, 1898. The under-graduate classes were continued until June. It will be observed that, owing to the change from winter to summer vacation, there was no class graduated in 1897.

Since 1898 the annual commencement exercises have been held regularly in June, but the closing day was afterwards changed to the first Tuesday, instead of second Wednesday, and in the session of 1910-1911 to the second Tuesday.

The College has been in continuous operation, and is now in its eighteenth session. During this time, the average enrollment has been 554, and the total, 9961, and the total number of graduates, (estimating the number for the present session at 88), is 767 distributed as follows:

In the Agricultural Courses 295; in the Engineering Courses, 389; in the Textile Courses 83.

The table on the following page gives accurate information as to the attendance, number of graduates, etc.

Session	Total Enrollment	GRADUATES BY COURSES							Total Graduates
		Agriculture	Agriculture & Chemistry	Agri. & Animal Industry	Mech. & Electrical Eng	Civil Engineering	Chemistry and Geology	Textile Industry	
1893	446	0	0	0	0	0	0	0	0
1894	635	0	0	0	0	0	0	0	0
1895	370	0	0	0	0	0	0	0	0
1896	350	15	0	0	22	0	0	0	37
'97-'98	*449	15	0	0	10	0	0	0	25
'98-'99	446	6	0	0	7	3	0	0	16
'99-'00	461	12	0	0	12	0	0	4	28
'00-'01	483	9	0	0	13	0	0	9	31
'01-'02	500	12	0	0	28	2	0	17	59
'02-'03	539	7	0	0	28	5	0	20	60
'03-'04	605	4	0	0	26	2	0	5	37
'04-'05	637	5	0	0	21	8	1	5	40
'05-'06	652	18	0	0	20	15	0	7	60
'06-'07	658	28	0	0	25	15	0	1	69
'07-'08	690	53	0	7	12	12	1	0	85
'08-'09	648	9	8	10	17	8	3	0	55
'09-'10	653	13	10	10	22	19	1	2	77
'10-'11	703	19	7	18	18	9	4	13	88
Totals	9961	225	25	45	281	98	10	83	767

By an act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of $100 per annum each, and free tuition, apportioned among the counties in the same manner as the members of the Senate and House of Representatives. This number has since been increased to 167, by the creation of two new counties.

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*Feb. 8, to July 15, 1897 and Aug. 15, 1897, to June 8, 1898.

ASSETS

The College property consists of a continuous tract of 1544 acres located at Clemson College, S. C., and 300 acres donated by the Southern Railway near Summerville, S. C.

The College received in addition to the property donated by the Clemson will, half of the Landscript Endowment, making the following total:

Clemson Endowment	$ 58,539
836 acres of land, (Fort Hill tract)	41,800
John C. Calhoun mansion	2,500
Paintings and personal property of Thos. G. Clemson	
	$102,839
Landscript Endowment (U.S.)	95,900
Total Original Assets	$ 198,739

Since the establishment of the College, the Trustees have, out of the regular income, not only operated the College, but have accumulated in land, buildings and equipment, over a million dollars, distributed in round numbers, as follows:

Additional land purchased (708 acres)	30,800
Volumes in Library	36,000
Public Utilities	65,000
Buildings	644,000
Shop, Laboratory and Class room Equipment	360,500
Total Added Value	$1,136,300

INCOME AND EXPENDITURES

The College derives its principal income from an inspection tax of twenty-five cents per ton on all fertilizers sold within the borders of this State.

During the political campaign of 1888 when the advocates of Agricultural Education were endeavoring to establish Clemson College, they promised that if the farmers would give to the College the Fertilizer Inspection Tax, they would undertake, not only to protect the farmers against fraudulent fertilizers by an efficient system of inspection and analysis, but also to erect and maintain an industrial College to educate without additional taxation, the young men of South Carolina. This proposition, by vote of the people, was agreed to.

The inspection tax, after deducting for refunded tags, has averaged during the 20 years ending July 1st, 1910, $91,860.38. For the last fiscal year, which ended July 1st, 1910, the receipts were $226,980.96.

The following summarized financial statement for the fiscal year ending July 1st, 1910, indicates clearly the sources of income.

Tag tax on fertilizers	$226,980.96
($244,770.82 less $17,789.86 refunded)	
Interest on Clemson Bequest	3,512.36
Interest on Landscript Fund	5,754.00
Morrill & Nelson Funds	20,000.00
Tuition from cadets	2,470.00
Miscellaneous, (sales, interests, unexpended balances, etc)	10,492.61
Total	$269,209.93

This income is expended as follows:

1. **In Public Work** required by Law, and done in the interest of the agricultural development of the State. The moneys thus expended do not aid in operating the College as an educational institution, in the ordinary sense.

Details of Expenditures for Public Work

For Fertilizer Inspection and Analysis	$24,253.40
For Agricultural and Textile Scholarships	17,222.06
For Coast Experiment Station	8,145.90
For Tick Eradication	8,166.09
For Veterinary Inspection	1,686.80
For Entomological Inspection	1,513.50
For Extension Work and Farmers' Institutes	4,413.45
For Miscellaneous Travel	56.75
Total	$65,457.95

2. In operating the College strictly as an educational institution, including the cost of operating utilities not ordinarily incurred by a College located within a city.

Operating Cost of College

Salaries of teachers and officers	$79,890.38
For normal operating expenses of the College—labor, materials, etc	53,796.77
For additions to Laboratory, Library, Classrooms and shop equipment (permanent)	9,974.34
Total	$143,661.49

Permanent Improvements

Permanent Improvements, as buildings, etc	$ 18,859.83

Deficit on Cadet Fund

To make up deficit in cadet fund caused by increased cost of living, for session '08-'09, (paid '09-'10)	$ 6,503.54

Condensed Summary of Expenditures

For Public Work	$ 65,457.95
For Operating College	143,661.49
For permanent Improvements	18,859.83
For deficit on Cadet Fund	6,503.54
Total Expenditure	$234,482.81
Balance Carried forward	34,727.12
Total	$269,209.93

(The College is engaged in public service, the magnitude of which the people are slow to understand. For last year ending June 30, 1910, as above, the public service cost the College $65,457.95, and the appropriations this year for the same and added lines of public work, amount to $92,101.45, an increase of $26,643.50.

We are often asked what disposition will be made of the increase in the fertilizer tax, which this year may go to $260,000, an increase of about $33,000 over last year.

It will be seen that after deducting the above increase in cost of public work, there remains an increase for the use of the College of less than $7,000. This is barely enough to keep up wholesome growth).

S. C. Agriculture Experiment Station.

In addition to the amounts expended for public State work, the S. C. Experiment Station, supported by the Hatch & Adams fund of the National Government, spent for conducting agricultural experiments $32,617.49.

SUMMARY OF RECEIPTS, EXPENDITURES AND THE COST PER STUDENT

For the Period

Nov. 1889 to June 30, 1910, (Nearly 21 Years)

(Taken from Trustees' Annual Reports to Legislature)

Total Received From S. C.

1.	From sale of property in Columbia, etc	$ 25,782.27
2.	From direct appropriation by Legislature	95,000.00
3.	From inspection tax on fertilizers	1,929,068.87
	Total received from State	2,049,851.14

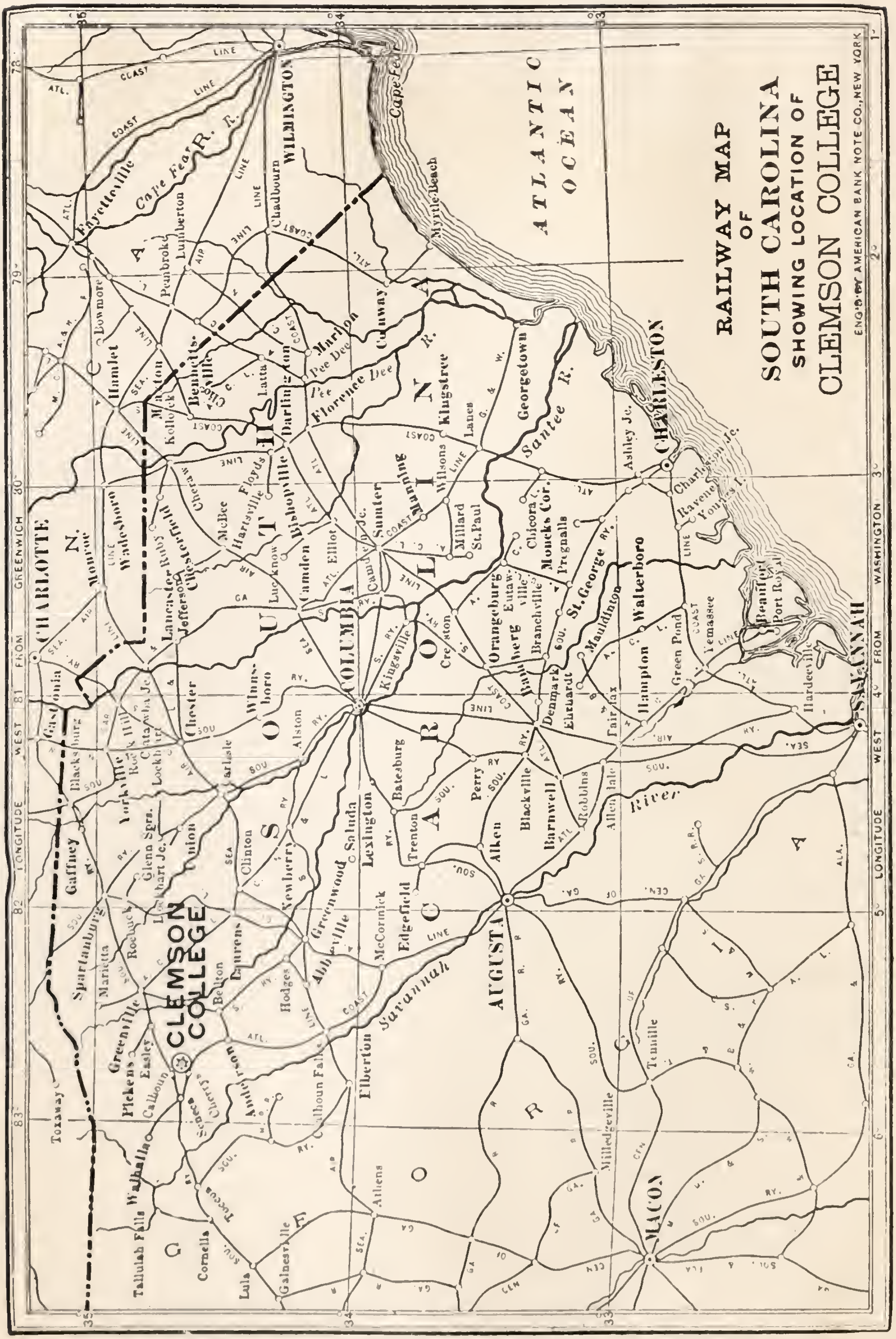
EXPENDED

1.	Value of inventoried visible assets (not including donations from Thos. G. Clemson)		$ 922 344 16
2.	Expended for Public Work and to comply with enactments of General Assembly as follows:		
	(a) Fert. Inspec. and Analy.	$221,286.79	
	(b) Ext. Work and Farmers' Institutes	15,163.49	
	(c) Vet. Inspec. and Tick Eradication	29,570.04	
	(d) Entomological Inspection	8,521.41	
	(e) Coast Experiment Station	34,468.50	
	(f) Agr. and Text. Scholarships	80,831.54	
	(g) Popular Bul'ts. and Fair Exhibits	6,930.73	
			396,772.50
3.	Operating expenses of College—17 sessions		730,734.48
	Total Expenditure of State Funds		$2,049,851.14

Total Enrollment for Seventeen Sessions	9,258
Cost per student per session, to South Carolina, ($730,734.48 divided by 9,258)	$ 78 9

Income From all Sources Available for Operating College

1.	Amount contributed by State, (See (3) above)	$ 730,734.48	
2.	Federal funds (Morrill, Nelson and Landscript)	375,000.00	
3.	Interest on Clemson bequest	71,437.30	
4.	Tuition	33,276.41	
			$1,210,448 1
	Cost per student per session to all sources		$130.7



RAILWAY MAP
OF
SOUTH CAROLINA
SHOWING LOCATION OF
CLEMSON COLLEGE

ENG'D BY AMERICAN BANK NOTE CO., NEW YORK

GROUNDS, BUILDING AND EQUIPMENT

Location

The College is located on the Fort Hill homestead of John C. Calhoun, on the dividing line between Oconee and Pickens Counties, in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level, and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet. The climate is invigorating and healthful, and the surroundings are in every way favorable to the highest physical and mental development.

The College is one mile from Calhoun, a station on the main line of the Southern Railway, and two miles from Cherrys, on the Blue Ridge Railroad. By means of these roads and their connections, the College is easily accesible from all parts of the State. It is connected by telegraph and long distance telephone with all parts of the country. The post office is conveniently situated on the campus, and receives five daily mails.

Campus and Farm

The College grounds occupy about 1544 acres of land, including the campus, sites of buildings and residences, the College farm, and the Experiment Station grounds. The campus, including about 200 acres, is laid out in walks, drives, and lawns, and is shaded by a beautiful grove of native forest trees.

The Main Building, Barracks, Etc.

The Main Building is a three-story brick structure, 130 by 149 feet, trimmed with gray sandstone. It contains 22 rooms, including recitation rooms, library and reading room, literary society and Y. M. C. A. halls, physical laboratory, and the offices of the President, the Commandant, the Treasurer, and a reception room. Adjoining this building is Memorial Hall, the College Chapel, which has a seating capacity of about one thousand. It is used for religious services and as an assembly room. In the tower of this building is a tower clock. The building is provided with steam heat and electric lights.

The Cadet Barracks comprise three large brick buildings. One is three stories high and contains 147 rooms for students, a dining hall 134 by 44 feet, and a kitchen 50 by 37 feet. The second building is 199 by 42 feet, and contains 104 rooms. The third building is 45 by 190 feet and contains 111 rooms. These buildings are heated by steam and lighted by electricity, and have an abundant supply of pure 'spring water. The rooms in the barracks are furnished with single-width iron cots and other necessary appointments. The dining hall is well supplied with table linen, silverware, and china, and the kitchen is furnished with modern culinary appliances.

The bathrooms and closets are located in brick buildings apart from the barracks and connected with them by covered gangways.

The General Water Supply is collected from springs and surface streams, and pumped from two stations into a standpipe one hundred feet high, having a capacity of 130,000 gallons. From this it is distributed through mains to the various College buildings and to all parts of the campus. This water is used for fire protection, sewerage. etc.

The Drinking Water Supply is pumped from a bold spring through the barracks, in a continuous stream. It is thus furnished fresh, pure and cold. This and all sources of water supply are kept under constant and strict surveillance,, and the waters are frequently analyzed as a precaution against contamination.

The Sewer System.—All of the larger buildings and most of the residences are connected with an adequate sewer system, which empties into the Seneca River more than half a mile from the campus.

Light and Heat.—All of the College buildings and most of the residences on the campus are lighted by electricity furnished from the central power station. The seven principal College buildings are heated by steam.

Central Power and Heating Plant.—This plant contains two 150 H. P. Stirling water-tube boilers, and two 100 H. P. Lombard return tubular boilers, with the necessary pumps, feed water heaters, and other auxiliary apparatus.

The power equipment consists of one 114 H. P. Fleming side-crank engine, direct connected to a 70 K.W. 2,300 volt, three-phase alternator with direct connected exciter, and one 122 H. P. Fleming four-valve engine direct connected to a three-wire 75 K. W. direct current generator.

A 75 K. W. rotary converter is used to convert from one kind of service to another.

The switchboard equipment consists of three standard blue Vermont panels, and three black enameled slate panels, all equipped with the latest and best electrical instruments and appliances. The alternator is connected to the rotary converter through three 25 K. W. transformers. All the machinery is of the General Electric Company's make.

The building is 40 by 80 feet, is a single story of brick and cement blocks, with metal roof.

The plant complete cost about $25,000, and is in every way modern and up to date. It furnishes steam heat for the Barracks and other College buildings, and electric lights and power to every department of the College and the residences of the community. Two pumping stations, situated about one-half mile distant, are electrically operated from this plant. These pumping plants have both steam and electric pumps and an aggregate capacity of 1,200 gallons per minute.

Agricultural Buildings and Equipments

The Agricultural Hall is a building 146 by 94 feet, in colonial style, and constructed of red side-cut brick, with columns and trimmings of oolitic limestone. It is furnished with a complete system of electric lights, water and sewer connections, and steam heat; and provides class rooms and laboratories for instruction in agriculture, horticulture, soil physics, botany and bacteriology, zoology and entomology, dairying and animal husbandry, geology and mineralogy, and offices for the Experiment Station. It also contains a room 40 by 60 feet, with a gallery for a natural history museum, and a gymnasium hall of the same dimensions below.

The Horticultural Grounds embrace an area of thirty acres. Eight acres are devoted to apples for experiment purposes, six acres to peaches, two acres to grapes, two acres to pecans, one acre to plums, seven acres to experiments with small fruits and vegetables, and three acres to ornamental trees, shrubs and flowers.

The Greenhouse is 21 by 140 feet and is heated by hot water. It is used for class instruction in ornamental horticulture and for experiment work. The house now contains three thousand large pot plants of various kinds and nine thousand small plants used for bedding purposes on the College campus.

There is another greenhouse with a center building 30 by 30 feet, and two wings, each 20 by 30 feet.

The Cannery is a frame building 25 by 35 feet. It is equipped for canning fruits and vegetables of all kinds.

The Veterinary Hospital is a two-story frame building 48 by 65 feet, with basement 18 by 30 feet. It is furnished with electric lights, hot and cold water, and is heated by means of stoves. The basement contains a dissecting room and a small room for hot-water plant, coal and general storage. The class room, office, pharmacy and a well equipped clinic and operating room are on the first floor. The laboratory, general store room and attendants' room are on the second floor.

The stable, containing seven box stalls, grain room and hay room, are in an adjoining building.

There is a well-sodded lot containing about two acres connected with the hospital. It is fenced with woven wire and divided into four paddocks. In one of these is an open cattle-shed, 13 by 32 feet.

The Dairy Building is a wooden structure constructed and equipped to illustrate the methods of dairy practice.

The Experiment Station Dairy Barn is a building, 110 by 38 feet, located on one of the highest elevations of the College property. It is a thoroughly modern structure from the standpoint of both convenience and sanitary conditions. It has a concrete floor, is lighted by electricity, and contains water in all parts of the building for washing floors, mixing foods, etc. It is fitted with 38 Taylor steel stanchions, which are both strong and comfortable. At one end of the building are four 50-ton silos. The second floor, which has a capacity of 50 tons of loose hay, is equipped with a hay-carrier that will elevate a load of hay at a time.

A number of paddocks and pastures have been provided to facilitate the management and to furnish sufficient pasturage for the stock.

Farm Buildings.—The College farm is provided with commodious barns and other farm buildings of modern design, which are described more fully in connection with the equipment for instruction in Agronomy.

Division of Agronomy

The classroom, the laboratory and the office of the agronomy division are located on the first floor of Agricultural Hall. The laboratory is supplied with the necessary equipment for familiarizing students with the more important economic plant seed.

The College farm has a large storage barn provided with silos, a cow barn furnished with various forms of stanchions, a mule barn provided with the most improved forms of stalls and feedracks, implement and wagon sheds for storage of tools, etc., and two large cribs for storage of corn.

Among agricultural machinery and implements may be mentioned the following: self-binder, corn-harvester, Deering ball-bearing mower, Osborne mower, self-dumping rake, check-row corn-planter, Buckeye cultivator, B. F. Avery cultivator, Tower cultivator, disc-cultivator, spring-toothed harrow, smoothing harrows, various forms of pulverizers, manure spreading machines, fertilizer and grain drills, various forms of small fertilizer drills, Planet Jr. drill, two Planet Jr. plows, scientific mill, stone grist mill, Tornado ensilage cutter, small thresher, hand-gin, rock-crusher, road machine, three terrace levels, and a 10 K. W. electric motor.

Division of Geology and Mineralogy

The division of geology and mineralogy occupies three rooms on the second floor of the agricultural building.

The systematic collections contain about 2500 labeled specimens of rocks, minerals and fossils. These are exhibited in glass cases in the laboratory and the museum, and are available to students and the public. A collection of the minerals and rocks of South Carolina is a prominent feature of the exhibit. There is also an unlabeled collection of minerals for practice in identifying the more important species at sight; and unlabeled collections of the most important minerals are provided for determinative work in the laboratory.

The laboratory is supplied with water and gas and all apparatus and reagents necessary for the determination of minerals by means of their chemical and physical properties. A chemical balance, a petrographic microscope, a photo-micrographic camera, and all important acessories, are also provided.

The classroom is supplied with large physical wall maps of the world and of all continents, a complete series of topographic contour maps, furnished by the United States Geological Survey, an 18-inch terrestrial globe, a 20-inch relief globe, a set of geological and geographical relief models, and several hundred lantern slides.

The geographical department of the College library contains the principal standard works of reference in geology and mineralogy, and receives all the publications of the United States Geological Survey as issued, including annual reports, monographs, geologic folios, and bulletins.

CLEMSON UNIVERSITY LIBRARY

Soil Physics

The soil physics laboratory is located on the ground floor of the Agricultural Hall and is provided with apparatus for the determination of water content, absorptive capacity, water holding power, and other physical properties of soils, and for performing experiments in evaporation, percolation, capillarity, etc., and making mechanical analyses.

Division of Horticulture

The classroom of the horticultural division is located on the first floor of the Agricultural Hall. The greenhouse, the hotbeds and the cold-frames are located in the horticultural grounds, where the principal practical work is done. The gardens, orchards and the vineyards are field laboratories for instruction in horticulture.

Division of Veterinary Science

The veterinary hospital has been described in the account of "Grounds and Buildings" on the preceding pages.

The classroom, the laboratory and the office of the veterinary division are located in the Veterinary Hospital The laboratory is supplied with microscopes, incubators, sterilizers, chemicals, skeletons, anatomical specimens, plaster casts, and other equipment for technical work.

Division of Zoology and Entomology

The laboratory, the recitation room and the office of this division are on the first floor of the Agricultural Hall. The laboratory is equipped with simple and compound microscopes, mitrotomes, dissecting instruments, photographic outfit, stereopticon, lantern slides and charts. The entomological cabinet contains a large number of injurious and beneficial insects.

The students have access to a small but carefully selected entomological library.

Division of Dairying and Animal Husbandry

The dairy building is provided with steam plant and water works, and everything for making butter and cheese. In this laboratory are located the leading makes of cream separators, churns, and milk-testers.

Division of Botany, Forestry and Bacteriology

The laboratory and class room are located on the first floor of Agricultural Hall. They contain a good equipment for satisfactory work in botany, forestry and bacteriology, including 25 dissecting microscopes, 27 compound microscopes, microscopic slides, lantern slides and charts, Zimmerman microtome, embedding baths, balances, incubator, Arnold & Koch sterilizers, autoclave, dry ovens, anaerobic apparatus. The students have access to a small botanical library.

A creditable beginning has been made in collecting a herbarium. The herbarium has been installed in new insect-proof cases on the museum balcony. The general collection includes the Anderson herbarium of 2,500 mounted specimens, about 700 mounted specimens of American violets, and 1,000 mounted specimens of flowering plants of central New York, as well as a set of the F. V. Coville plants, of New York State. The South Carolina herbarium contains over 1,200 mounted specimens, representing the South Carolina flora, and is kept separate from the general herbarium.

Division of Extension Work and Farmers' Institutes.

From its establishment until 1909 Clemson College had been occupied in educating in improved methods of Agricultural and Engineering practice the boys of this state who were able to attend. At that time the Board of Trustees decided that the time had come when this college could be of greater benefit to the people of the state. It recognized the fact that, though destined to follow agriculture in after life, many boys of the state are unable to attend the college. Then too, there are in the state many men actually engaged in agriculture, who can be helped by carrying to them the scientific facts of agriculture. In order that these classes might be reached and benefited, the Board established in the Agricultural Department the Division of Extension

Work and Farmers' Institutes.

The men of this division have nothing to do with the teaching in the college, but devote their whole time to helping the farmers and others of the state. The men of this division work in two ways:

First: They form the basis of a permanent institute corps to hold institutes at such times as the farmers of the state are at leisure to attend. The majority of these institutes will be held in the rural districts, where they will reach those farmers most in need of them.

Second: Each of these men selects a few farmers scattered over the state who are interested in their special line of work. These men are visited regularly and receive the benefit of the advice of the expert. An accurate account of all operations and their results is kept and will be published in bulletin form for the benefit of the others.

The Assistant in Rural School Agriculture encourages the teaching of agriculture in the rural schools. To this end he selects a few schools and visits them regularly, giving regular agricultural instruction. In addition he meets the teachers in their various organizations and, by pointing out to them subjects and methods, encourages them to teach agriculture themselves.

In addition to this regular force, every man in the college and especially in the Agricultural Department and the Experiment Station is called upon to help in the work. Each paper in the state is supplied once a week with a short article by some member of the faculty giving useful information upon some pertinent subject. This constitutes a good reading course for farmers and others.

The Engineering Department has prepared a bulletin giving plans and specifications for building the simpler rural school houses and stands ready to extend similar help in other lines of rural construction.

A Correspondence Course in Agriculture, designed primarily for the benefit of the rural school teachers, is also established. This will be followed later by a number of short courses to be given at the college. Once a year during the summer a state institute, or farmers' congress, to last three or four days, will be held at the college.

Engineering Buildings and Equipment

The Mechanical Engineering Building is a substantial brick structure containing about 35,000 square feet of floor space. On the first floor are mechanical laboratory, machine shop, wood shops, forge shop, and foundry. On the second floor are the offices and the drawing and designing rooms. The third floor is devoted to class rooms and to the division of civil engineering.

The Electrical Instrument Laboratory is a brick building of special design, arranged especially for delicate instrument work.

The Dynamo Laboratory is a modern brick structure 37 by 80 feet. Besides containing the dynamo electric machinery for instructional use, it also contains the electrical engineering lecture room.

Division of Mechanical Engineering

This laboratory is situated on the ground floor of the Engineering Building, and occupies a room 51 by 45 feet, and contains the following equipment:

For Steam Engineering.—One 15 H. P. horizontal, locomotive type boiler; one 6-H. P. vertical boiler; one 6-H. P. Erie, plain slide valve steam engine, throttling governor; one 5-H.P. vertical engine built by students; 15-H.P. Payne high speed, automatic cut-off engine; one Corliss cross compound engine, arranged to run either condensing or non condensing and with either or both cylinders with high pressure steam; one7-K.W. Curtis steam turbine non-condensing, direct connected to a two-pole direct current compounded generator; one Wheeler surface condenser, with combined air and circulating pumps; one set steam gauge testing apparatus; one Carpenter's Separating Calorimeter; two Carpenter's Throttling Calorimeters; six steam engine indicators of various makes; four injectors; two draft gauges; five steam gauges.

For Hydraulic Engineering.—One Power Triplex pump; one Pelton water motor; two hydraulic rams; three duplex pumps of different makes; one weir; one Hook Gauge; one altitude gauge.

For Compressed Air.—One Clayton air compressor, water jacketed; one improved air motor.

For Fuel and Lubricants.—One Carpenter's coal calorimeter with scales, balances and oxygen generating device; one standard viscosimeter; one Thurston friction tester.

For Testing Materials.—One 100,000-pound Olsen automatic vertical testing machine driven by 5-H. P. Westinghouse electric motor, and fitted for either tension or compression; one Fairbanks' cement testing machine; one Vicat needle with proper sieves and moulds; one graduated flask for determining specific gravity; one moist closet for storage; one 3,000-pound tranverse testing machine.

The laboratory also contains a 5-H. P. Otto gasoline engine; one Ericsson hot air engine; a 6-H. P. transmission dynamometer, graduated to read horse-power direct and built by students; four platform scales; four spring balances; seven mercury thermometers; one electrical resistance thermometer; two Bristol thermo-couples for reading temperature to 2,000 and 2.900 degrees F. respectively. All apparatus is so arranged that it may be used for separate or combined tests. Besides the apparatus in this room, the apparatus in the Power Station and the Pumping Stations are available for instruction and tests.

Division of Electrical Engineering.

This division occupies two single-story brick buildings, heated by steam and lighted by enclosed arc and incandescent lamps.

Electrical Instrument Laboratory.—This is a separate building, especially designed for delicate electromagnetic work, no iron, steel or other magnetic substances having been used in its permanent construction. Its equipment contains the following instruments and apparatus:Leeds and Northup potentiometer with volt bed and standard resistances for current measurement; Kelvin deka ampere balance; Weston laboratory standard voltmeter with multipliers; Becker analytical balance and weights; two 1-6-H.P. Crocker Wheeler motors; fifteen galvanometers, (including tangent, Kelvin, D'Arsonal and ballastic instruments); nine standard resistance sets; three standard resistance and Wheatstone Bridge sets; four meter-wire bridges; one magnetometer; two standard condensers; commercial condensers; Weston and Carhart-Clark standard cells; ammeters; voltmeters; rheostats; keys; switches; storage cells; primary cells; and other miscellaneous apparatus; also a quantity of special apparatus made in the College shops and laboratories.

The instruments in the above equipment are from such makers as Elliott Brothers, Nalder Brothers, Leeds and Northup, Queen and Company, Weston Electrical Instrument Company, etc.

Dynamo Laboratory.—This building is 37 by 80 feet, with basement. The main floor is divided into a lecture room 35 by 25 feet, and a laboratory 35 by 53 feet. The basement contains a supply room and a large dark room

The lecture room has raised seats, and is equipped with instruments, illustration models and other demonstration apparatus, including an electro-magnet capable of supporting the weight of two tons.

The dynamo laboratory equipment contains the following instruments, machines and other apparatus: direct current instruments: voltmeters: two Weston portable; two Weston switchboard; one Jewel portable; ammeters; three Weston milli-voltmeters, with current shunts; four Weston switch-board; one Jewell portable; wattmeters; two Thomson recording, and two Weston indicating.

Direct current dynamos: 17-K. W. Lundell, 15-K. W. Mather, 2½-K. W. Crocker-Wheeler, two 2-K. W. Kester, 15-H. P. Kester, 10-H. P. Kester, ½-H. P. Kester.

Arc Lighting Apparatus: Brush and Thomson-Houston Generators, a General Electric Company constant current transformer, open and inclosed arc lamps.

Alternating Current Instruments: voltmeters: one Weston portable, one Whitney hot wire, five Thomson inclined coil, one Cardew, one Aryton and Perry, one Hoyt, one Kelvin electrostatic. Ammeters: one Westinghouse portable with current transformer, one Stanley hot wire, seven Thomson inclined coil, one Seimens electro-dynamometer. Indicating Wattmeters: two Weston, two General Electric Company.

Alternating Current Apparatus: 15-K. W. General Electric Company, single, two, three and six phase revolving field generator, complete with marble switch board and full set of indicating instruments. 7 ½-K. W. General Electric Company single, two and three phase rotary converter. 7-K. W. three-phase converter built by students. General Electric Company single, two and three-phase induction motor, three 3-K. W. and three 5-K. W. constant potential transformers. General Electric Company condensers, assortment of coils, models, etc.

Miscellaneous: 50-H. P. high speed McEwen automatic engine, 3-ton portable crane, two Schaeffer and Budenberg tachometers, prony brake, rheostats, circuit breakers, switches, fuse testing apparatus, lightning arresters, etc.

The Dark Room is equipped with apparatus for high potential, high frequency and X-Ray work, and a Deshler-McAlister central station photometer with rotating stand for incandescent lamp testing.

The machinery in the dynamo laboratory is driven by the 50-H. P. engine and by motors. Steam and electric power for these is furnished by the central power plant, described on another page. Students have access to this plant, and are thus enabled to see the practical workings of a combined electrical power, light, and heating plant, and to test its efficiency. The problem of power distribution and utilization can also be studied from a practical example.

Division of Civil Engineering

The collection of field instruments contains the following:

One complete transit with solar attachments; three engineer's transits; four railroad compasses; two six-inch vernier compasses; one precise level; three twenty-inch wye levels; one dumpy level; two architect's levels; one convertable architect's level; one drainage level; one Locke hand level; one binocular hand level; two stadia hand levels, with a supply of self-reading and target rods. One complete plane table; a Price current meter, with steel boat and truck sextant; aneroid barometer; flag poles; tapes; chains and all necessary accessories.

The office equipment includes planimeter, slide rules and drafting instruments.

Division of Physics

The physical lecture room and laboratory is situated in the main College building, is 33 by 60 feet, and is well equipped with apparatus for both the lecture and the experimental work of a general course in physics.

Division of Drawing and Designing

This division is located on the second floor of the Engineering Building, and occupies seven rooms, two of which are used by the Freshman Class in Freehand Drawing, two by the Freshman Class in Mechanical Drawing, one large room by the Junior and Senior Classes in Mechanical Drawing and Machine Design, the other as an office.

These rooms were designed for the use of the division, and are of ample size, well lighted, and well equipped with individual lockers for about 500 students, and drawing tables for about 25 students at a time in each room.

They also contain a large number of models of various kinds; reference books and tables; and a display of catalogues and drawings from manufacturing firms and of the best student work, all of which are of great benefit to the student in his work. The more expensive and less used instruments are kept in the office for the use of any student needing them Two blue print rooms adjoin the other rooms of the division and are well equipped with all necessary frames and appa ratus for printing by electricity and sunlight. All students are requirred to furnish their own instruments, boards, T squares and other material. They are advised to buy these at the Cadet Exchange, where samples can be seen and wholesale prices obtained. All drawing tools used by students must be approved by the instructor in charge; second hand or inferior instruments will not be accepted. Students make a mistake in buying low-priced instruments, which appear to be of good quality, but are inferior and will not give good service, soon necessitating the purchase of another set.

Division of Forge and Foundry

Forge Shop.—The forge shop is located in a wing of the Mechanical Engineering building, and occupies a room 37 by 44 feet. The equipment is installed under two separate systems. One system consists of 18 Buffalo down draft forges; 18 Eagle anvils equipped with small tools; a 60-inch exhaust fan; a No. 4 direct connected pressure blower; a drill press; an emery grinder; a bending cone; a Buffalo iron shear; two swage blocks; a vise and work bench. The other system consists of 18 Sturtevant down draft forges; 18 Eagle anvils, thoroughly equipped with small tools; a 60-inch exhaust fan, and a No. 4 pressure blower, both directly connected to electric motors.

Foundry.—This building occupies a space 43 by 76 feet, and is free from posts or other obstructions. It is equipped with a 26 Victor Calbion cupola, driven by a No. 7 pressure blower; a Millets core oven; a two-ton post crane; eight improved moulders' benches; hand, bull and truck ladles; and a full equipment of the moulders' tools.

The brass foundry is equipped with an 18-inch brass furnace, crucibles, tongs, drying stone, and other accessories.

Division of Machine Work

The Machine Shop occupies the ground floor and part of the basement of the south-west wing of the Engineering Building, the main floor being 45 by 100 feet, lighted from one end and both sides, and steam heated.

The equipment is as follows: suitable benches and vises for chipping, filing, etc., and for assembling machines; one 18-inch 12-foot-engine lathe; one 18-inch 8-ft. engine lathe; eleven 14-inch six-foot engine lathes; one 10-inch four-foot turner's lathe; one 15-inch 8-foot speed lathe; two universal milling machines; two 18-inch vertical drilling machines; one 28-inch vertical drilling machine; one 22-inch 6-foot planer; one universal tool and cutter grinder; one 10-inch by 32-inch universal grinding machine; one 14-inch shaping machine; one 10-inch slotting machine; one 22-inch wet emery tool grinder; one twist drill grinder; one dry emery grinder; one 36-inch grind stone; one power hack saw; one fan blower; forge, anvil, and set of smith's tools.

Twelve sets of tools in portable cases are provided for the use of the students, each set containing an assortment of chisels, files, cutting tools for lathe work, hammer, monkey wrench, steel scales, screw driver, spring calipers, dividers, scriber, rule, center punch, center gauge, one inch micrometer caliper, oil can and cotton waste.

A tool room is located in one end of the shop, in which is kept an extensive assortment of tools, some of which are: a set of twist drills from 1-6 to 2 inches; a set of machinist hand reamers from 1-8-inch to 4 inches; a set of Morse standard taper reamers; a set of taper pin reamers; a set of internal and external caliper gauges from ¼ inch to 2½ inches; a set of U. S. standard taps and dies from 1-16 to 1¼ inches; a set of clamps, dogs, lathe, planer and shaper tools, milling machine cutters and emery wheels; a center grinder; standard gauges; and internal and external micrometer calipers from 0 to 6 inches.

A supply of steel and brass, and a large assortment of screws, bolts, nuts, etc., are kept in stock.

All of the machines are driven from one line shaft, running the full length of the shop, and driven by a 15-horse power electric motor that was built in the shop.

Artificial lighting is accomplished by means of four arc lamps.

Division of Woodwork.

The Woodwork Division consists of two shops, both on the ground floor. The first, 37 by 100 feet, is divided into two class rooms, both of which are supplied from one well-equipped tool room.

The freshman class room contains eight turning lathes, and fifteen work benches, each supplied with a full set of tools.

The sophomore class room is equipped with eight turning lathes with tools, eighteen work benches, and ninety sets of bench tools, a separate set for each student. This room also contains a large pattern lathe, one 30-inch band saw, one jig saw, two grind stones, and one universal trimmer.

The other shop is equipped with planing mill machinery, consisting of a double-roll planer, one rip saw, one cross-cut table saw, one swinging cut-off saw, one lathe with 12-foot bed, one jointer, one moulding machine, one tenoning machine, one doubleheaded shaper, one single spindle carver and shaper, one mortising and boring machine, one re-saw, one swinging arm sand papering machine, and an assortment of benches, clamps, glue pots, etc.

This shop is 40 foot by 100 foot, and is driven by a 20-H. P. electric motor. Each class room also has its individual motor drive.

A lumber yard and steam dry kiln adjoins.

Chemical Buildings and Equipment

The original chemical laboratory is a two-story brick building, 50 by 80 feet, covered with slate and finished inside with Southern pine. Overlapping this at one corner, and connected with it by a glass-enclosed passage, is a new somewhat similar building, 35 by 86 feet, of modern style and handsome design. This double building, which is well ventilated, heated by steam and lighted by electricity, constitutes a commodious structure adequate to all the needs of the department.

On the first floor of the old building, which is used for academic work, there are five rooms. Three of these are employed as laboratories for agricultural seniors and juniors. Of the remaining rooms on this floor, one is a balance room, while the other is used as a class-room.

On the second floor of this building there are two large laboratories, one for the juniors in analytic chemistry, the other for the sophomores in general chemistry. A third, and smaller room, is used as a balance room.

The junior laboratory will accomodate 72 students, 36 at a time; the sophomore laboratory, 120 students, 60 at a time. The laboratories are all provided with hoods for carrying off noxious gases, convenient working tables, water, gas, electric lights, and all necessary appliances for experimental work.

The basement of the building is used for assaying, for the preparation of distilled water, and for storage. The air pump and the mixer of the gas machine for supplying the laboratories with gas are placed in this basement and connected with the generator, which is buried 85 feet from the building.

On the first floor of the new building there are nine rooms, all of which are appropriated to state analytical work and agricultural analysis. On one side of the wide hall, which extends the entire length of the building, are the rooms for the analysis of fertilizers. Three of these rooms are used, respectively, for the determination of phosphoric acid, nitrogen and potash; the fourth as a balance room; the fifth and last as a sample room. On the other side of the hall there are four rooms. The largest of these is used for agricultural analysis. Adjoining is a balance room, in which provision is made also for electrolytic apparatus. Of the remaining rooms, one is used for water analysis, the other as an office.

On the second floor of this building there are seven rooms; a lecture room, and six smaller rooms, which are used for recitations, cabinets, apparatus, chemicals, library, and professor's laboratory.

The lecture room will seat 170 students, the seats being arranged in tiers.

The hoods in both buildings are all connected by earthenware pipes with a tightly built room just under the roof, over each of which there is a large ventilator.

The rooms in the basement are used for assaying ores, and for storage. In one of these rooms there is a gas machine for supplying gas especially to the new building, though this machine and the one in the old building are so arranged that either may be used to furnish gas to both buildings in case of necessity.

Textile Building and Equipment

The building is a brick structure of modern cotton mill design, 168 by 75 feet. It is of the slow burning type, built according to fire insurance regulations, after plans of an experienced mill engineer. The building, although designed for educational and experimental purposes, containing office, lecture-rooms and laboratories, retains the more prominent features of a typical Southern cotton mill. This affords the student an opportunity of gaining many points of valuable information in connection with mill construction, along with the manipulation of cotton fibres and the study of cotton mill processes and operations.

The first floor is occupied by the picking, carding and spinning machinery, a lecture room, the main office, an exhibit room and the departmental library. The machinery on this floor is driven by two electric motors, one a 30-H. P., 220-volt, direct current Westinghouse motor, driving the carding machinery, and a 20-H.P., 220-volt, direct current General Electric Company motor, driving the spinning machinery.

The second floor is occupied by two weave rooms, three lecture rooms, laboratory for organic chemistry, an office and two store rooms. The power looms on this floor are driven by a 20-H. P., 220-volt, direct current General Electric Company motor.

The basement, which is situated under the north end of the building is occupied by the dye-house and laboratory for industrial chemistry.

The building is equipped with a system of "Vortex" humidifiers from the American Moistening Company; steam-heating system and automatic fire-sprinklers from the D. A. Tompkins Company; shafting, pulleys and hangers from Jones & Laughlin, Ltd., and from T. B. Wood's Sons.

Division of Carding and Spinning

The equipment of this division is as follows:

Pickers.—One Atherton automatic feeder; one Atherton breaker; one Atherton finisher lapper, with evener motion.

Cards.—One Saco & Pettee 40-inch revolving top flat; one Mason 40-inch revolving top flat; two traverse wheel grinders; two drum traverse grinders; stripping and burnishing rolls; two complete sets of carders' tools.

Combing.—One Mason sliver lap machine; one Mason ribbon lap machine; one Mason six-head combing machine.

Railway Heads.—One Saco & Pettee railway head, with evener motion, stop motions, and metallic rolls; one Mason railway head, with evener motion, stop motion, and metallic rolls.

Drawing—Two Saco & Pettee drawing frames, four deliveries, stop motions, and metallic rolls; one Mason drawing frame, four deliveries, stop motions, and metallic rolls.

Fly Frames.—One Saco & Pettee 12-inch by 6-inch 40-spindle slubber, with latest differential motion; one Saco & Pettee 8-inch by 4-inch 60-spindle intermediate roving frame, with latest differtial motion; one Woonsocket 6-inch by 2½-inch 96-spindle jack roving frame, with Daly's improved differential motion.

Ring Spinning.—One Saco & Pettee combination warp and filling ring spinning frame, 128 spindles; one Mason combination warp and filling ring spinning frame, 112 spindles; two Fales & Jenks combination warp and filling ring spinning frames, 80 spindles each, designed for spinning fine counts; two Whitin combination warp and filling ring spinning frames, 80 spindles each.

Mule Spinning.—One Mason self-acting spinning mule, 120 spindles, 1¾-inch gauge, with all latest improvements.

Spooling.—One Draper spooler, 40 spindles; one Saco & Pettee spooler, 72 spindles; one Barber & Coleman knotter.

Twisting.—One Draper combination wet and dry twister, 48 spindles; two Fales & Jenks wet twisters, combination filling and taper top wind; 70 spindles each.

Winding.—One Universal cone and tube winder.

Reeling.—One D. A. Tompkins Company adjustable reel, 50 spindles.

The division of carding and spinning is equipped with all necessary supplies, such as doff-boxes, roving-cans, bobbins, spools, cops, cones, tubes, and change gears for all machines.

Division of Weaving and Designing

The equipment of this division is as follows:

Winding.—One W. W. Altemus & Son bobbin winder; one Atwood-Morrison Company bobbin winder; one Geo. W. Payne & Company skein winder.

Dressing.—One Davis & Furber dresser, one Davis & Furber jack spooler.

Warping.—One Draper section warper; one Draper ball warper.

Beaming.—One Entwistle beaming machine.

Jacquard Card Cutting.—One John Royle, French index, foot-power card-cutter.

Hand Looms.—Seventeen 15-inch hand looms with 4x4 box motions and 30 harness shedding engines, arranged for four beam work.

Power Looms.—One 40-inch Northop loom fitted with 16-harness Stafford dobby; one 28-inch Northop loom with steel harness warp stop motion; one 36-inch Mason Gingham loom with 4x1 box motion; one Mason 44-inch loom with Stafford 20-harness dobby; one Mason 40-inch cam loom, arranged for 2, 3, 4 and 5 harnesses; one Stafford 30-inch fancy cotton loom with 20-harness dobby and leno attachment; one Stafford 30-inch loom with Halton 624-hook, double lift, single cylinder jacquard; one Crompton & Knowles 40-inch "Gem" loom, with 30-harness dobby and 4x4 box motion; one Crompton & Knowles 26-inch fancy towel loom with 16-harness dobby and 3x1 box motion; one Crompton & Knowles 64-inch loom, 4x1 box motion, fitted with 624-hook, double lift, single cylinder jacquard, tied for weaving damask; one Whitin 40-inch cam loom arranged for 2, 3, 4 and 5 harnesses; one Whitin 40-inch fancy cotton loom with 20 harness dobby; one Whitin heavy pattern duck loom; one Crompton & Knowles 30-inch fancy cotton loom with 16-harness dobby and 2x2 box motion; two Kilburn & Lincoln 38-inch cam looms; one Knowles 30-inch loom with 416-hook, single lift, swing cylinder jacquard tied for weaving napkins; one 28-inch "E" model Draper loom with steel harness stop motion; one 28-inch "E" model Draper loom with two thread warp stop motion; one 28-inch "E" model Draper loom with Lacy top rig and tape selvage motion, arranged for two, three, four and five harness work; one 28-inch "K" model Draper loom with 20-harness dobby, double filling fork and feeler, arranged for two beam work.

Division of Textile Chemistry and Dyeing

The work in textile chemistry and dyeing is carried on in an experimental laboratory and a practical dyehouse. These are equipped with the necessary apparatus and chemicals for instruction in organic chemistry, scouring, bleaching, dyeing, mercerizing, printing, etc.

The experimental laboratory is fitted with appropriate work-tables, furnishing accomodations for 64 students, working by detachments. Each table is supplied with the necessary arrangements for gas and water, and drawers and lockers in which may be stored apparatus and unfinished experiments.

The Dye House contains nine dye vats, four fitted with copper heating coils, one for peroxide bleaching; one Schaum & Uhlinger self-balancing hydro-extractor; one model Vacuum dyeing machine with steam engine attached; one Birch sample dyeing machine with electric motor attached; one calico printing machine; one mercerizing machine for yarn; one steaming and ageing box; one 20-gallon jacketed copper kettle; one drying closet.

Department Library

For the use of students and instructors, a reading room in the textile building has been fitted up and is furnished with some of the more important books of reference relating to the textile industry, and also with the leading periodicals relating to the subject. All journals and periodicals are contributed. There is also in this room an exhibit of the work done by the students in the different divisions of the department, and an equipment of old machinery, illustrating the methods used before the introduction of power machinery. The room is open every week-day throughout the session.

Office of Fertilizer Inspection

The main floor and half of the basement of the two-story brick building between the chemical and the engineering building are used for the office of the Board of Fertilizer Control. The Clemson College post-office is located in the other half of the basement, and the college printery occupies the second floor. The printery equipment is as follows:—One Babcock regular drum cylinder printing press, 22 by 27 inch bed; two Chandler & Price job presses; one Chandler & Price cutter; one Morrison stitcher; two perforators; one letter folder; two Hammond cabinets; two imposing stones; one No. 1 model linotype machine with supply of matrices for same; a supply of type, furniture, etc. All the machines are driven by individual motors. The college reports, bulletins and miscellaneous stationery are printed here, much of the work being done by students.

Gymnasium

A large room in the basement of the Agricultural Hall has been set aside by the Board of Trustees for a gymnasium. This room is equipped with well-selected gymnasium apparatus, such as a horizontal bar, parallel bar, spring board, travelings rings, flying rings, climbing rope, horse, low parallels, floor mats, and take-off board.

The object of the gymnasium is to give training all the year round to those students interested in athletics, so that they may constantly be in good condition for work on the athletic teams. It is also designed for those students who do not take other forms of exercise, but depend upon the gymnasium for their only means of physical development. The work is not requred, but is engaged in by a large number of students. A member of the faculty superintends the work and directs the exercises.

Museum

On the first floor of the Agricultural Hall, the Museum of Natural History is located. During the past year the museum has been furnished with large cases, and the collections of the geologist, the entomologist and the botanist have been installed.

Hospital

The Hospital, located about a quarter of a mile from the Barracks, is a wooden building, especially designed for the purpose. It is lighted by electricity, and has a thorough sewerage system. The hospital is in the immediate charge of the surgeon, who is assisted by an experienced matron and nurses, thus insuring the best personal attention to each patient.

Laundry

The Laundry is a brick building especially constructed and fitted with the improved machinery of a modern steam laundry, and is operated exclusively for the students.

Library

In the main building is a series of rooms especially constructed for the use of the Library. There are now upon the shelves 10,654 volumes, classified under the various heads of literature, history, biography, science and reference books. In addition to these in the general library, there are 1,493 volumes in Experiment Station and department libraries of the College. There are also about 5,000 government publications and 200 reference books, together with about 6,000 pamphlets. The library is supported by an annual appropriation, and the number of books is added to each year.

In connection with the library there is a reading room in which the students have access to 35 of the leading monthly periodicals, 14 weekly, the principal daily papers of the State and many of the county papers.

The Clemson Relics

A collection of thirty-seven oil paintings, collected by Mr. Clemson, chiefly in Holland, together with a number of additional portraits, may be seen in the reception room in the main building.

The Calhoun Relics

Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the College.

Residences and Hotel

The Calhoun Mansion, the former residence of John C. Calhoun, is kept in honor of his memory, in accordance with the provisions of Mr. Clemson's will.

Residences.—Ten two-story brick buildings, nine six-room cottages, thirty-five smaller houses, all situated on the campus, furnish residences for professors and other officers of the College.

Clemson Club Hotel.—The College Hotel, a frame building with two eight-room annexes, situated on a hill overlooking the campus, is operated by several members of the Faculty In addition to furnishing a home for the members of the club, it is open the entire year to a limited number of transients.

ORGANIZATION OF THE COLLEGE

1. **Agricultural Department**
   - Agriculture
   - Geology and Mineralogy
   - Horticulture
   - Veterinary Science
   - Zoology and Entomology
   - Dairy and Animal Husbandry
   - Botany, Forestry and Bacteriology
   - Extension Work and Farmers' Institutes
2. **Engineering Department**
   - Electrical Engineering
   - Mechanical Engineering
   - Civil Engineering
   - Physics
   - Drawing and Designing
   - Forge and Foundry Work
   - Machine Work
   - Wood Work
3. **Chemical Department**
   - Chemistry
   - Metallurgy
4. **Textile Department**
   - Carding and Spinning
   - Weaving and Designing
   - Textile Chemistry and Dyeing
5. **Academic Department**
   - English
   - History and Political Economy
   - Mathematics
6. **Military Department**
   - Military Science and Tactics
7. **Agricultural Experiment Station**

Organization and Mode of Government

Board of Trustees. This board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations.

The President is the executive head of the College, and has general supervision of all matters within and pertaining to the College, and is charged with executing all rules and regulations passed by the Board of Trustees.

The College is divided into seven departments, namely: I. Agricultural, II. Engineering, III. Chemical, IV. Academic, V. Textile, VI. Military, VII. S. C. Agricultural Experiment Station. A Director is at the head of each department, and is responsible to the President for its conduct and success. The departments comprise the various divisions indicated on the opposite page. The divisions are in the immediate charge of the Professors, Associate and Assistant Professors, and Instructors of the respective departments. The President conducts all official business with each department through its Director.

The Directors and the full Profesors constitute an advisory body to the President, known as the General Faculty, which meets periodically to confer upon all matters pertaining to the interests of the College and students.

In order to aid him in his executive duties the President appoints Committees from the Officers of Instruction, to which are assigned certain specified lines of work.

The Discipline Committee, established by the Board of Trustees, is composed of the President, the Directors and the full Professors. All important questions of discipline involving possible suspension or dismissal are considered by this body. The treatment of minor offenses rests with the Commandant.

The students are allowed wide latitude in carrying on affairs which concern themselves, such as athletic, literary, musical and social organizations. The aim of the Faculty is to assist in every possible way in making these interests helpful to the student body as a whole. In these matters the disposition is to allow a reasonable amount of time for recreation, and to contribute as far as possible towards making the students contented and happy.

Military Organization and Mode of Government

The following extracts from the Regulations for the Government of Cadets explain the organization and mode of government of the corps.

"1. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction."

"2. The Commandant of Cadets, under the President of the College, has immediate command and control of the corps of cadets in all that pertains to its organization, drill, military police,, discipline and administration. He is charged with the instruction of the cadets in the theoretical military course and in all practical military exercises. He will prescribe the order in which the furniture, bedding, books, clothing, equipments, etc. shall be arranged throughout the barracks, and shall, in person, make a minute and thorough inspection of the rooms, furniture, arms and accoutrements, etc. of the cadets at least once each week, and make a report thereon to the President."

"3. For instruction in tactics and for military police and discipline the corps of cadets will be organized into one or more battalions of two or more companies each, and a band when practicable. In case the number of cadets will permit of the formation of two or more battalions, the organization will be regimental."

"4. The cadet officers and non-commissioned officers will be appointed by the Commandant of Cadets, subject to the approval of the President of the College. The selection for these positions will be made from those cadets who have been most studious and soldier-like in the performance of their duties and most exemplary in their general deportment. As a rule, the cadet captains and lieutenants will be selected from the senior class; the non-commissioned staff and the sergeants from the junior class; and the corporals from the sophomore class."

Leave of Absence

All communications from parents, requesting leave of absence from the College for their sons, must be addressed directly to the President, not through the cadets.

A parent must remember that as long as their sons are students in the College they must submit to the rules made for the government of all.

A parent has the right to **withdraw** a son from College, but not to insist that he be given a leave of absence in violation of the rules or policy of the Institution. To obtain a leave of absence his reasons must be satisfactory to the President. In general no permits will be granted that interfere with regular work, including the study hours.

The rules governing in case of permits to visit home during the session of the College require that cadets who have accumulated more than eight demerits in any one term, and who have fallen below grade two in their studies on any report, will not be allowed to leave College during the term except in cases of extreme sickness or death in the family.

No leave of absence or honorable discharge will be granted during the last term, except for serious causes.

A student who has been granted leave of absence and who stays over the time allowed, unless for sickness or other good and valid reasons acceptable to the President, will lose his place in the College and will be required to file a new application for admission and pay the matriculation fee of $5 again before being allowed to re-enter. In case he has been sick, a certificate from the attending physician must be submitted.

General Regulations

The "Rules and Regulations for the Government of Cadets," a copy of which is furnished each cadet, contains the following:

Cadets must at all times be respectful in their bearing to professors and other officers of the College.

Cadets are subject to military discipline at all times, and are required to take part in drill, guard duty and other military exercises.

All undergraduate students are required to board in the barracks, except those who live with their parents or relatives near enough to attend from their homes.

Those occupying a room are consulted before another student is assigned to that room. A student not satisfied with his room-mate has the privilege of applying for permission to move to another room, and such applications are granted when practicable.

No trunks, bags or boxes will be allowed in the rooms ot cadets. Trunk rooms accessible at stated times will be provided for storing trunks.

The practice known as "hazing" is positively forbidden. All cadets upon matriculation are required to sign a pledge not to indulge in hazing or injuring in any form the person of any cadet or give countenance or encouragement thereto while a member of the corps of cadets. Any cadet indulging in this practice will be dismissed from the College.

If any cadet shall consider himself wronged by another, or by any officer of the College, he has the right to complain thereof in writing to the President, who will examine into the complaint and take such measures for redressing the wrong as he may deem proper.

All combinations of cadets for the purpose of censuring one of their number are prohibited; also all combinations to defeat the purpose of any regulation of the College.

Cadets are forbidden to keep in their possession any firearms or other weapons not issued by the proper authority.

The College rules require that all students be vaccinated, and parents are advised to have this done before sending their sons away from home.

Any cadet who leaves barracks without authority between retreat and reveille shall be dismissed.

Cadets are positively forbidden to use, or have in their possession, intoxicating liquors of any description.

Profanity and gambling are positively forbidden.

The smoking of cigarettes is positively forbidden. During the hours from 9:00 A. M., to 1:00 P. M., and from 2:00 P. M., to 5:00 P. M., cadets will not be permitted to smoke on the campus or in the college buildings.

Cadet "limits" is defined as all the college lands with certain excepted places. Cadets not otherwise prohibited are permitted during release from quarters to be on the above mentioned grounds without special permission.

Demerits will be awarded for every unremoved report, the number depending on the nature and the degree of the offense.

Any cadet receiving 67 demerits during any term shall be brought before the Discipline Committee, and shall be dismissed or less severely punished.

Cadets who receive no demerits during any calendar month will be given a credit of eight demerits to be applied in removing any demerits that may have been charged against them during any month of that term.

For infraction of rules cadets are punished according to the gravity of the offense.

Punishment consists of confinements (detention of cadet in his room), confinement to barracks or other specified limits, reprimands, extras, (walking equipped as sentinel), reduction to ranks (for officers and non-commissioned officers), arrests, close arrests, suspension, and dismissal from college.

Punishments for offenses are awarded by the Commandant of Cadets, and for extraordinary or unusual offenses by the President or the Discipline Committee, according to the nature of the case.

The Commandant and his officers have the right to inspect anything in a cadet's room.

Grades and Reports

Reports of class-standing and discipline are sent to parents at intervals of approximately one and one half months throughout the session. During 1911-1912 these reports will be made up for periods ending on the following dates, and will usually be mailed to parents about one week later. October 28, 1911, December 16, *1911, February 10, 1912, March 16,* 1912, April 27, 1912, and June 8, 1912. Dates marked with the asterisk (*) are approximate, depending upon the beginning of the respective term examinations.

The session is divided into three terms, ending December 21, 1911, March 22, 1912, and June 11, 1912, respectively.

Rules for Re-Examination and Promotion

1. No re-examination shall be granted to a student in a subject in which he has made a class mark of less than 60 per cent. for the term, or an examination mark of less than 40 per cent.

No student shall be allowed re-examination who makes less than 60 per cent. on more than three term examinations during the session, or more than two examinations for one term, provided that if all three failures are in the same subject, he may be allowed re-examination in one additional subject for one term.

2. A student who fails on a re-examination or term class mark shall be required to take that work over with the class, and schedule it first.

3. A student, who for any reason, fails to take his re-examination at the scheduled time, shall not be allowed to take the examination except by permission of the general faculty.

4. All re-examinations, except for seniors, shall be held during the first five days of the session, provided however, that if a student has missed all term examinations on account of sickness he may be granted re-examinations at special times suitable to the faculty and to the instructor concerned.

5. Students who are granted special privileges to make up work shall be required to report at the next scheduled period after the privilege is granted, and a list of such delinquents shall be furnished each instructor concerned, and deficient subjects in the lower class shall be made up first.

6. A failure in practical work shall have the same weight as a failure in a theoretical subject.

7. A student below the Junior class shall not be granted an irregular course.

8. A student taking the class over forfeits all previous records in that class.

9. Each student shall be required to make up all deficiencies before he is given permission to change his course, or he must take these deficient subjects along with his new course, and he shall be classed as a conditioned student until these deficiencies are removed.

10. No student shall be promoted from one class to another who has a failure in more than one subject for the preceding year, and a student who is promoted with work behind shall be classed as a conditioned student, and shall be required to schedule first the subjects on which he is deficient.

11. No student who has work to make up shall be promoted to the Senior Class.

COLLEGE INSTITUTIONS

Religious Exercises

Chapel Services.—There is preaching in Memorial Hall every Sunday morning by ministers of the different denominations, and chapel services are conducted every morning by a resident minister or a member of the faculty. All students are required to attend these exercises unless specially excused.

Sunday School.—A Sunday school, at which attendance is voluntary, also meets every Sunday morning, and students are encouraged and urged to attend.

Young Men's Christian Association

The College Young Men's Christian Association is fundamentally a Christian organization, with four great objects, which are as follows: To lead students to become disciples of Jesus Christ as their divine Lord and Savior; to lead them to join the Church; to promote growth in Christian faith and character, and to enlist and train them in Christian service.

At Clemson the association has supervision and direction of all the religious activities of the College except the Sunday school, the Sunday morning services, and the daily chapel exercise. The activities include; a religious service on Sunday evening, a mid-week prayer-meeting on Wednesday evening, a daily prayer service just after breakfast, and a series of special evangelistic meetings from time to time. In November the Week of Prayer is appropriately observed conjointly with the college men of America.

The Bible department offers three courses of study; one on the life of Christ; one on the life of St. Paul; and one in the Old Testament. These classes meet on Sunday evening and are led by students, who are prepared for this work through training classes led by members of the faculty, the local ministers and the general secretary. During the past year 348 cadets were enrolled in 30 of these group classes. This department also conducts Bible institutes and special training conferences. A week's series of Bible lectures, delivered by some recognized Biblical scholar, does much to stimulate study and research in the Christian religion.

The department of missions has general supervision of all the missionary activities of the College, and, like the Bible department, is pursuing a broad educational policy. The conditions and needs of the non-Christian world, and how these conditions are being improved and the needs supplied, are brought to the attention of the students through addresses, literature, and study classes. A small but select library is kept in the office of the general secretary, where it is always acessible to the members.

This year the Association is uniting with two other College Associations in the support of a Missionary, Mr. E. B. Barnett, in the Foreign field.

The property of the association, the significance of membership, the social activities, the summer conferences, and the rules for the use of the tennis courts, cannot be given in detail here.

In order to prosecute this work intelligently it has been found necessary and desirable to maintain a secretary, who has general supervision of all the work of the organization. This secretary has no official connection with the College; either as a disciplinarian or instructor; neither is he a College preacher. He is an older and more experienced student, employed by the students as their counsellor, their advisor, and the director of their religious work.

All students should know the secretary personally, for his unique position enables him to be of service to students in many ways. Owing to the change which is to be made in the location of the Y. M. C. A. quarters this year, the Secretary will be found in one of the rooms in the story that is to be added. Students are welcome to his room at all times; and he is there for their convenience.

Parents and students desiring further information should write to the General Secretary, R. L. Sweeney, at the College, or to the President, Cadet A. G. Small.

Care of the Sick

The Surgeon is one of the regular officers of the College, and his special duty is to look after the health of the students. He also has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a regular appointed time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the College Hospital. In case of necessity students are allowed to consult the Surgeon at any time, or send for him, as may be required.

The Surgeon cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. However, they may rest assured that they will be promptly notified of sickness of any consequence. In case of serious illness the Surgeon will telegraph them.

Student Labor

The College assumes no obligation to furnish employment to students for wages. Considerable manual labor, however, is necessary to carry on the various departments of the College; and when practicable, students are employed in this work. The number applying for work always exceeds the number that can be employed, and those who enter College late in the session are at a special disadvantage in securing work.

No student is allowed to undertake work that interferes with his College course.

Literary Societies

Three literary societies, the Calhoun, the Columbian and the Palmetto, furnish a valuable supplement to the work of the College. These societies afford facilities for practice in debate, oratory, declamation and essay writing, and their members acquire valuable knowledge of parliamentary law and usage. The meetings are held weekly, on Saturday evenings. An annual contest is also held by each society, at which there are debates, orations and declamations by the students.

On these occasions a representative is chosen from each society to enter the contest for the Trustees' Medal at commencement. The societies themselves also award medals annually to the best debater, orator, and declaimer.

The societies occupy halls in the main College building, which are furnished with carpets and opera chairs, and are maintained entirely by the students. A small initation fee is charged, and small monthly dues to meet running expenses. All students are advised to join one of these societies.

State Oratorical Contest

The literary societies also send a representative to the annual contests of the South Carolina Intercollegiate Oratorical Association, which includes the following institutions: Furman University, Wofford College, Clemson Agricultural College, Presbyterian College of South Carolina, Erskine College, Newberry College, South Carolina Military Academy, and University of South Carolina.

Publications by the Students

The Clemson College Chronicle, a monthly magazine designed to encourage literary work among the students, is published jointly by the literary societies during the College session.

An **annual**, an illustrated volume, is published under the auspices of the senior class.

There is also **The Tiger**, published weekly, which is devoted largely to athletics.

The Science Club

The Clemson College Science Club was organized for the purpose of promoting knowledge of the progress of the natural sciences, theoretical and applied. Public meetings are held every month, at which subjects of general scientific interest are discussed by members of the faculty and others.

The Clemson Biological Club

This club is open to members of all the faculties of Clemson College and to all students. Its object is to stimulate interest in biological subjects, and to keep its members fully abreast of current biological work and thought.

A regular meeting is held once each week in the Agricultural Hall.

Lecture Course

A lecture course, employing some of the best talent on the American platform, is provided every session. These lectures are delivered in Memorial Hall, at a cost to students of one dollar for the course. During the session of 1910-1911 the following lectures and concerts were given:

Hinshaw Grand Opera Company	Oct. 8
Bostonia Sextette	Oct. 29
Luther Manship	Nov. 19
DeWitt Miller	Dec. 23

Cambrian Glee Club	Jan. 7
Creatore's Band	Feb. 9
The Spragues	Feb. 25
Festival Quartette	March 1
Byron Piatt	March 18
Karl Jansen	April 4
Burton McDowell	April 29
Lyric Glee Club	May 1

Cadet Exchange

A Cadet Exchange is maintained, where students may purchase at wholesale prices necessary articles, such as books, stationery, collars, cuffs, underwear, etc.

College Athletics

It is the policy of the College to sanction and encourage athletics so long as they do not interfere with studies and other duties. Football, baseball and track are the most popular sports, and it is assumed that parents are willing for their sons to participate in these games unless the President is definitely notified to the contrary. The athletic teams are permitted to take a few trips each season, usually on Saturday, to play intercollegiate games. The College is a member of the Southern Intercollegiate Athletic Association (S. I. A. A.,) and of the South Carolina Intercollegiate Athletic Association (S. C. I. A. A.).

Athletic Council.—The Southern Intercollegiate Athletic Association has placed the athletic interests at each college under the supervision of an athletic Council, consisting of members of the Faculty and the student-body. This council consists of nine members—two members of the Faculty, the President and the secretary-treasurer of the local athletic association, elected by the students, and three members of the Faculty chosen by the Faculty, and the four class presidents.

Intercollegiate Athletics.—For the regulation of intercollegiate athletics, the Faculty has adopted the following rules:

1. Monthly Standing.—Any student who fails on more than two subjects during a collegiate month shall not be allowed to participate in match games during the ensuing month. If, by reason of absence or other cause, a grade on the month's work is lacking, the instructor shall give a temporary grade based upon the work done, and this temporary grade shall be used in determining the student's athletic standing until the regular grade is available.

2. Sessional Standing.—No student who is found to be deficient in more than one subject for a term shall be allowed to play in any match game during the next college year. Change from one course to another, or from a regular to an irregular or special course, shall not interfere with the operation of this rule.

3. Student Taking Class Over.—(a) That a student taking a class over be not allowed to play football who has any monthly failure in any subject.

(b) A student taking a class over shall not be allowed to play unless he passes in the first and second terms without any failures, and is otherwise eligible.

4. Graduate Students.—No graduate student shall participate in any match game unless he is taking at least twenty hours per week of graduate work; that is, work of a higher grade than is given in the regular College courses. Such student shall also conform to the rules of class standing as set forth in Sections 1 and 2. Further, no graduate student of more than one year's standing shall participate in any match game.

5. Irregular or Special Student.—No irregular or special student shall be allowed to represent the College in any match game unless taking at least twenty-four hours' work per week, of which not less than twelve hours shall be "theoretical" work.

6. No football player who leaves College before the end of the first term, except for reasons satisfactory to the Faculty Athletic Committee, shall be allowed to participate in match games during the next three College terms.

7. It shall be the duty of the Faculty Athletic Committee to see that the foregoing rules and regulations are strictly enforced.

8. No team shall be allowed to leave the College grounds to participate in any match game unless accompanied by a member of the Faculty, who shall be responsible to the Faculty for the conduct of the players and coaches while away from the College. Such representative shall be appointed by the chairman of the Faculty Athletic Committee, and his expenses shall be included in the expenses of the trip.

ADMISSION OF STUDENTS
COURSES OF STUDY, FEES, ETC.

Admission of Students

Candidates for admission must be sixteen years of age,

Students desiring to enter college should apply to the President for application blanks, and these, properly filled out, should be returned to the President as early in the summer as possible, and in no case later than August 14th.

Certificates of good moral character are required of all candidates not known to members of the Faculty; and if the candidate comes from another college, this certificate must show that he was honorably discharged.

In selecting students who shall be admitted to the College subject to their passing the required examinations, the following rules, prescribed by the Board of Trustees, will govern:

1. Students must undergo a medical examination, and no student will be admitted who is not healthy and free from contagious diseases including tuberculosis.

2. Students will be apportioned among counties in proportion to representation in the House of Representatives, under the following rules and regulations:

(a) Applicants prepared to enter College classes will have preference over those who enter only the preparatory class.

(b) As between applicants of equal preparation, the oldest will have the preference.

(c) Other things being equal, the first applicants will receive permission to enter.

(d) When a county has not sent its quota, the places thus left shall be apportioned among the other applicants.

(e) Provided a sufficient number of applicants from the State to fill the barracks do not apply, then students from other states may be admitted, and when so admitted, may continue in College until they complete their course.

(f) Applicants not entering within ten days after the opening of the session will have their rights in the place given to applicants next on the roll.

Students upon arrival at the College at the opening of the session must report at once to the President's office and matriculate **before they will be assigned to quarters in the barracks.** No student will be admitted to any of the classes or examinations of the College before matriculation and payment of fees. (See page 72).

Matriculation is equivalent to a pledge to conform to the rules of the College.

Entrance Requirements

For admission into the Freshman class a thorough knowledge is required of arithmetic, elementary algebra, English grammar, geography, and history of the United States.

Candidates bringing a certificate from the principal of any State High School, showing that they have successfully passed the first two years work of that school, will be allowed to enter the Freshman class without examination. All others will be required to stand the entrance examinations.

Arithmetic.—The applicant is expected to have a thorough practical acquaintance with the ordinary principles and operations of arithmetic. Wentworth's Practical Arithmetic is recommended as a suitable text-book.

Algebra.—The detailed requirements are as follows: Definitions and notation, fundamental operations, including laws and signs, and the interpretation of negative results; use of parentheses; factoring; highest common factor; simple incommon multiple; single and complex fractions; simple integral and fractional equations with one unknown number, and problems leading to such equations; simultaneous equations of the first degree, with applications to solution of problems; involution of monomials, and polynomials; evolution of monomials and polynominals; theory of exponents with applications, radicals, including solution of equations involving rationalization; simple operations with imaginary expressions; pure and affected quadratic equations containing one unknown number, with application to problems.

The student should cover carefully the whole ground here specified, and should acquire a clear understanding not only of algebra processes, but of the principles and reasons involved in every operation. Students fail on entrance examinations more frequently because of imperfect knowledge of the subject matter pased over, than because they have not gone far enough in the text-book.

A satisfactory treatment of the topics in algebra may be found in Wentworth's New School Algebra (used in the public schools).

English.—Applicants are examined in spelling, sentence analysis, and oral reading, and are required to write short essays on an assigned subject.

Geography.—Applicants must possess a fair knowledge of general geography, such as may be obtained from a proper study of Frye's Advanced, Maury's Manual, Tarr and McMurry's Complete Geography, or other standard text books of equal grade. The following topics will be especially emphasized in the entrance examinations: Outlines and positions of the continents, and locations of the principal mountains, plateaus, river basins, and costal lowlands; influences of land forms and climate upon the life and industries of the inhabitants; locations and outlines of important countries, particularly those of America and Europe, and of the States in the United States; locations of great cities in all conditions favorable to the growth of cities.

History.—A School History of the United States, by White, is the text-book recommended. Any other school history may be used in place of the one named.

Entrance Examinations

Entrance Examinations. are held during the first week of the opening session, September 14th to 16th, 1911, and all applications for admission are expected to report promptly at the beginning of this period. Former students, also, who have conditions to remove or work to make up, are required to report at the same time.

Examinations on the subjects required for entrance will be held on the dates shown in the following schedules beginning at 9 a. m.:

For Admission to the Freshman Class

Arithmetic—Thursday, September 14, 1911, at 9 a. m.
Algebra—Thursday, September 14, 1911, at 2 p. m.
English—Friday, September 15, 1911, at 9 a. m.
Geography—Friday, September 15, at 2 p. m.
History—Saturday, September 16, 1911, at 9 a. m.

Examinations are held at the close of each term, and reports are sent to parents, giving the results of these examinations and also the averages of monthly grades in all subjects pursued by the student. The student must attain at least the pass-mark, 60 per cent. on both examination grade and term average in each term separately and in every subject in his course, in order to be entitled to promotion to the next higher class.

For Admission to the Preparatory Class

Arithmetic—Thursday, September 14, 1911, at 9 a. m.
English—Friday, September 15, 1911, at 9 a. m.
Geography—Saturday, September 16, 1911, at 9 a. m.

Upon passing satisfactorily the required examinations, the Committee on examination furnishes the applicant with a certificate to that effect, and upon presentation of this certificate at the President's office he is assigned to the class recommended by the Committee.

For Admission to Advanced Standing

For admission to advanced standing, applicants must be prepared to stand examinations on the subjects passed over by the lower classes, as indicated in the courses of study scheduled on the following pages. Such applicants should report with other new students during the regular examination period and arrange with their instructors for the necessary examinations before the opening of the session. Students admitted to advanced standing are allowed a reasonable length of time in which to make up shop work of the lower classes, in case they have not done equivalent work elsewhere.

For Admission to State Scholarship

Examinations for admission into the beneficiary scholships established at the recent session of the Legislature are held by the various county boards of education, and can not be given at the college. For further particulars in regard to these scholarships, see page 75.

Fees and Expenses

The regular fees for the session, not including tuition, are as follows:

Incidental fee	$ 5.00
Medical fee	5.00
Breakage fee	3.00
All uniforms	32.35*
Board, washing, heat, light etc.	76.52
Total	$121.87

*This amount is approximate, depending upon the price of the uniforms.

These charges must be paid in quarterly installments as follows:

September 13, 1911	$64.48 ~~$61.31~~
November 15, 1911	19.13
January 17, 1912	19.13
March 21, 1912	19.13
Total	$121.87

Tuition students pay $10.00 per quarter additional. Free tuition is allowed only to South Carolina students. Books and other necessary articles are to be had at the Cadet Exchange. Books used in the preparatory course cost $7.65. For the freshman class Agricultural Department for the first term: books, $9.00; drawing instruments and note books, $11.00. For the second term: books, $4.00. For the third term: books, $2.50. Freshman class Engineering Department for the first term: books, $9.00; drawing instruments and note books, $14.50 and upward, according to quality. For the second term; books, $4.00. For the third term; books, $2.50.

For the sophomore class, Agricultural Department: first term; books, $11.25. For the second term, $5.50. For the third term, $1.00. For the sophomore class, Engineering Department: for the first term; books, $11.25: drawing supplies, $2.50. For the second term: books, $7.00; drawing supplies, $1.50. For the third term books, $2.25; drawing supplies, $1.00. These books and supplies can be most economically purchased through the Cadet Exchange. Each student must provide himself with four sheets, two blankets, one comfort, six towels, two pillow cases, one pillow and two single mattress covers.

Settlement of College Fees

Remittances should be made in cash, by money order, New York exchange, or by local check, payable to Dr. P. H. E. Sloan, Treasurer, Clemson College, S. C.

The breakage fee is a deposit to cover damage or destruction of College property, and any amount remaining to the credit of a student at the end of the session will be returned to him. Whenever College property is damaged, the cost of repair is charged to the individual student, if the responsibility can be determined. Otherwise the cost is divided equally among all the students. Any student whose breakage account exceeds $3.00 will be required to make another deposit.

Rules Governing Refunds to Students

Refunds will be made to students under the following rules:

1. Out of the amount deposited for uniforms, a refund will be made for any garments that are accepted by the Com-

mandant as serviceable. Parents will be notified of the amount refunded under this rule.

2. The refund for board, laundry, heat, light and water will be at the rate of $6.50 per month. No refund will be made for interruptions of less than one month.

3. A refund of all moneys, except 25c. per day for board, will be made to any student who leaves College within ten days of the date of his matriculation.

4. Any balance of the $3.00 breakage fee at the end of the session will be sent to parents after the close of the session in June.

5. No refunds of medical or incidental fees will be made unless a student withdraws within ten days after the date of matriculation.

6. No refund of the quarterly tuition payment of $10.00 will be made unless the student withdraws from College within ten days of the beginning of the quarter in which the fee is paid.

A fee of $2.00 is charged for diploma, payable before graduation.

Free Tuition

AN ACT to Require the Authorities of all Institutions of Learning Supported or Controlled in Whole or in Part by the State, to Report to the General Assembly the Names of All Students at Such Institutions and Whether They are Pay, Beneficiary or Scholarship Students; and to Require the Auditors of All the Counties to Keep a Record and File of All Affidavits of Inability to Pay Tuition Made Before Them, as Now Required by Law.

Section 1. Be it enacted by the General Assembly of the State of South Carolina, That from and after the approval of this Act, the authorities of all colleges or institutions of learning supported in whole or in part by the State, shall report to the General Assembly at its annual meeting the names of all students, with the post office address of each, and whether such students are pay, beneficiary or scholarship students.

Sec. 2. That the Auditors of the several Counties of this State be required to keep a record and file of all affidavits made before them, as now required by law, of inability on the part of the parent, guardian or trustee to pay tuition.

Sec. 3. That all Acts and parts of Acts inconsistent with this Act be, and the same are hereby, repealed.

Approved the 24th day of February, A. D. 1906.

In accordance with this law, residents of South Carolina are granted free tuition upon presentation of a certificate, signed by father or guardian and the County Auditor.

Certificate blanks will be furnished upon application to the President.

Statement of the State Laws and College Rules Governing The Award of Scholarships

1. Each county is allowed as many scholarships as it has representatives in the General Assembly. The total number for the State is one hundred and sixty-seven. The number of vacancies in any particular county can be learned by making inquiry of the President of Clemson College.

2. Scholarship students are required to take one of the Agricultural Courses, except that one scholarship per county is allowed in the Textile Course. Scholarship students are not permitted to take the Engineering Courses.

3. Each scholarship pays $100.00 per session in cash, and allows free tuition, worth $40.00 more. The scholarship is good for four consecutive years, unless terminated by the students' failure to maintain himself in his classes, and comply with the rules of the College.

4. The scholarships are awarded on competitive examinations. The examinations are conducted by the County Superintendents of Education at the county seats, on the second Friday in July, from 9 A. M. to 4 P. M.

5. The examination questions are prepared, and the

papers are graded, by the Clemson faculty. This faculty reports the winners by number to the State Board of Education, and the State Board makes the award in conformity with the above recommendations.

6. The examinations are on the common school branches. An applicant must meet the entrance requirements of the Freshman Class to pass.

7. The College has a right to reject any applicant, who in respect of age (16 years at the time of entering), examination papers, or in any other respect, fails to meet its requirements for admission.

8. The following are not eligible for scholarship appointments:

(a) A person who during the current year has won or holds a scholarship at another State institution.

(b) A person who has been in attendance at Clemson College or "any other institution of higher learning known as as a College or University," provided however, that this condition shall not apply if there are no other applicants for the scholarship.

(c) A person who has forfeited a scholarship at Clemson College or any other State institution by failure to maintain himself.

9. No applicant shall be debarred from standing the examinations because he has failed to fill out the necessary certificate of financial inability as required by law, but this certificate must be in the hands of the President of Clemson College before the applicant can be considered eligible for a scholarship. (The blank certificate form can be obtained at any time from the President of Clemson College, or from the County Superintendent of Education on the day of the examinations.) It must reach the President not later than noon of August 1st, otherwise the applicant will be eliminated from the competition.

10. If a scholarship vacancy shall occur, and the county to which it belongs has no eligible applicant, the Clemson faculty may fill the vacancy by awarding the scholarship to

some eligible applicant from another county, or if the vacancy occurs after the opening of the session, to a student at the College. However, any such appointment shall last not longer than the current session.

Note.—Scholarship students will therefore have to deposit $21.87 with the Treasurer at the beginning of the session. This amount is approximate, depending on the price of the uniforms.

County Appointment

The one hundred and sixty-seven scholarships provided for in this institution by the Legislature are apportioned to the counties of the State according to law as follows:

Abbeville	4	Greenwood	4
Aiken	5	Hampton	3
Anderson	6	Horry	3
Bamberg	3	Kershaw	3
Barnwell	4	Lancaster	3
Beaufort	4	Laurens	4
Berkeley	4	Lee	3
Calhoun	2	Lexington	4
Charleston	9	Marlboro	4
Cherokee	3	Marion	3
Chester	4	Newberry	4
Chesterfield	3	Oconee	3
Clarendon	4	Orangeburg	5
Colleton	4	Pickens	3
Darlington	4	Richland	5
Dillon	2	Saluda	3
Dorchester	2	Sumter	4
Edgefield	3	Spartanburg	7
Fairfield	4	Union	3
Florence	4	Williamsburg	4
Georgetown	3	York	5
Greenville	6		

PRESCRIBED COURSE OF STUDY

As briefly described and tabulated on the following pages, seven regular four-year courses are offered, each leading to graduation with the degree of Bachelor of Science (B. S.,) the course pursued being designated on the diploma.

The three agricultural courses are alike in the freshman and sophomore years, and agricultural students are, therefore, required to choose between these at the beginning of the junior year. The other four courses are alike during the first two years, and choice between them is made at the beginning of the junior year. The descriptions accompanying the detailed schedules of studies in the various courses are intended to aid the student in arriving at an adequate estimate of the scope and purposes of each course, in order that he may the more intelligently choose between them.

COURSE I. AGRICULTURE

This is a broad educational course, covering the whole field of natural sciences that are tributary to the agricultural industry, together with a liberal amount of mathematics, English, physics, history and political economy, and a maximum amount of chemistry.

The division of the original course into (1) Agriculture (2) Agriculture and Animal Industry, and (3) Agriculture and Chemistry, described on the following pages, has been made in order to afford opportunity for election in these lines. In this course the student is given more special training in agriculture, horticulture, chemistry, botany, bacteriology and entomology; and thus is laid a foundation upon which he may readily specialize in any of these branches after graduation. The student is well equipped to take up farming, gardening, or fruit-growing as an occupation, or for the pursuit of investigational work in the United States Department of Agriculture or the various State Experiment Stations.

Each of the agricultural courses forms an excellent foundation for the study of other professions, particularly that of medicine.

COURSE I. AGRICULTURE

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term	PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (271)	3	2	2
English (501)	5	5	5	Freehand Drawing (240)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (243)	2	2	2
Agriculture (100)	2	2	2	Forge Work (252)	3	2	2
				Botany (171)	0	2	2
				Bookkeeping (540)	2	2	2
				Military Drill (602)	3	3	3

Sophomore Class.

Mathematics (522)	5	0	0	Chemistry (301)	3	3	3
English (502)	3	3	3	Civil Engineering (531)	0	2	2
Chemistry (300)	3	3	3	Zoology & Entomology (140)	2	3	3
Agriculture (101)	0	0	2	Botany (172)	4	4	0
Physics (231-233)	2	3	3	Agriculture (101)	0	4	4
Civil Engineering (531)	0	2	3	Physiography (117)	3	0	0
Zoology & Entomology (140)	1	3	2	Military Drill (602)	3	3	3
Botany (172)	1	1	0				

Junior Class.

English (503)	2	2	2	Chemical Lab. (303, 305)	3	3	3
History (514)	2	2	2	Horticulture (121)	2	0	2
Chemistry (304)	2	2	2	Agriculture (102)	0	2	4
Horticulture (120)	2	0	2	Dairying (162)	3	3	0
Animal Husbandry (150-152)	0	2	2	Forestry (173. 175)	2	0	0
Dairying (161)	2	2	0	Animal Husbandry (154)	0	0	3
Agriculture (102)	0	2	2	Veterinary Science (130-131)	0	4	0
Veterinary Science (130-131)	2	2	2	Entomology (142)	2	0	0
Forestry (173)	2	0	0	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class.

Political Economy (515)	3	2*	0	Agriculture (103-105)	4	4	3
English (504)	0	2*	3	Horticulture (122)	2	2	2
Agriculture (103-105)	3	3	2	Animal Husbandry (160)	2	3	2
Animal Husbandry (157, 153)	2	2	2	Bacteriology (177)	0	3	3
Horticulture (122)	2	2	3	Botany (176)	4	0	0
Geology (111-112)	2	3	2	Entomology (143)	0	0	2
Botany (176)	2	0	0	Military Drill (602)	3	3	3
Bacteriology (177)	0	2	2				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

COURSE II. AGRICULTURE AND ANIMAL INDUSTRY

This is a differentiation of the original Course in Agriculture for the purpose of affording students specially interested in general animal industry, dairying and veterinary medicine an opportunity to receive more instruction in these lines than was formerly practicable. There is a growing interest in animal industry throughout the State, and this course is intended to meet the demand for more specialized training in this phase of agriculture. In order to afford more time for instruction in these branches, some important, but less essential, studies have been omitted. English, history and civics are retained throughout the course. Drawing the first year, physics the second year, geology the last year, and chemistry the last three years, but slightly reduced and changed to meet the demands of this new course. Botany, bacteriology, zoology and entomology are so planned as to begin the first year of the course and thereby contribute to clearer knowledge of farm crops, live stock, dairying, sanitation and animal disease. General agriculture is taught during the first two years, horticulture the third year and veterinary medicine the last three years; while live stock and dairying are taught throughout the course. The live stock work embraces the study of the breeds of horses, cattle, sheep, hogs and poultry, and includes judging, breeding, feeding and care and management of flocks and herds. In the dairy course are taken up the production, handling, manufacture and marketing of whole milk, cream, ice cream, butter, and cheese.

COURSE II. AGRICULTURE AND ANIMAL INDUSTRY

Freshman Class

THEORETICAL	Hours per week 1st Term	 2nd Term	 3rd Term	PRACTICAL	Hours per week 1st Term	 2nd Term	 3rd Term
Mathematics (520-521)	5	5	5	Wood Work (271)	3	2	2
English (501)	5	5	5	Freehand Drawing (240)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (243)	2	2	2
Agriculture (100)	2	2	2	Forge Work (252)	3	2	2
				Botany (171)	0	2	2
				Bookkeeping (540)	2	2	2
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522)	5	0	0	Chemistry (301)	3	3	3
English (502)	3	3	3	Civil Engineering (531)	0	2	2
Chemistry (300)	3	3	3	Zoology & Entomology (140)	2	3	3
Agriculture (101)	0	0	2	Botany (172)	4	4	0
Physics (230)	2	3	3	Agriculture (101)	0	4	4
Civil Engineering (531)	0	2	2	Physiography (117)	3	0	0
Zoology & Entomology (140)	1	3	2	Military Drill (602)	3	3	3
Botany (172)	1	1	0				

Junior Class

English (503)	2	2	2	Chemical Lab. (303, 305)	3	3	3
History (514)	2	2	2	Horticulture (121)	2	0	2
Chemistry (304)	2	2	2	Agriculture (102)	0	2	4
Horticulture (120)	2	0	2	Dairying (162)	3	3	0
Animal Husbandry (150, 152)	0	2	2	Forestry (173, 175)	2	0	0
Dairying (161)	2	2	0	Animal Husbandry (154)	0	0	3
Agriculture (102)	0	2	2	Entomology (142)	2	0	0
Veterinary Science (130-131)	2	2	2	Veterinary Science (130-131)	0	4	0
Forestry (173)	2	0	0	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

Political Economy (515)	3	2*	0	Animal Husbandry (160)	3	2	2
English (504)	0	2*	3	Veterinary Science (136)	3	3	3
Animal Husbandry (157,155,153)	4	2	2	Bacteriology (178)	0	3	4
Veterinary Science (134-135)	2	2	3	Dairying (162)	2	0	0
Geology (111-112)	2	3	2	Agriculture (103, 105)	4	4	3
Agriculture (103-104-105)	3	3	2	Military Drill (602)	3	3	3
Bacteriology (177)	0	2	2				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

COURSE III. AGRICULTURE AND CHEMISTRY

This is a differentiation of the original course in Agriculture for the purpose of affording students specially interested in chemistry, mineralogy and bacteriology an opportunity to receive more instruction in these subjects than is offered by the other agricultural courses. There is a growing demand for well-trained chemists, and the students who propose to select the profession of chemistry will find that this course is well arranged to give them a good foundation in the science and at the same time furnish them a liberal education.

COURSE III. AGRICULTURE AND CHEMISTRY

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5
English (501)	5	5	5
History (511, 513)	3	3	3
Agriculture (101)	2	2	2

PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Wood Work (271)	3	2	2
Freehand Drawing (240)	2	2	2
Mechanical Drawing (243)	2	2	2
Forge Work (252)	3	2	2
Botany (171)	0	2	2
Bookkeeping (540)	2	2	2
Military Drill (602)	3	3	3

Sophomore Class

THEORETICAL	1st Term	2nd Term	3rd Term
Mathematics (522)	5	0	0
English (502)	3	3	3
Chemistry (300)	3	3	3
Agriculture (101)	0	0	2
Physics (230)	2	3	3
Civil Engineering (531)	0	2	2
Zoology & Entomology (140)	1	3	2
Botany (172)	1	1	0

PRACTICAL	1st Term	2nd Term	3rd Term
Chemistry (301)	3	3	3
Civil Engineering (531)	0	2	2
Zoology & Entomology (140)	2	3	3
Botany (172)	4	4	0
Agriculture (101)	0	4	4
Physiography (117)	3	0	0
Military Drill (602)	3	3	3

Junior Class

THEORETICAL	1st Term	2nd Term	3rd Term
English (503)	2	2	2
History (514)	2	2	2
Chemistry (304)	2	2	2
Mineralogy (111)	2	2	2
Botany (172)	2	0	0
Horticulture (120)	2	0	2
Agriculture (102)	0	2	2
Dairying (161)	2	2	0
Animal Husbandry (150-152)	0	2	2
Forestry (173)	2	0	0
Military Science (600)	1	1	1

PRACTICAL	1st Term	2nd Term	3rd Term
Chemistry (303)	6	6	6
Mineralogy (111)	0	2	2
Forestry (173, 175)	2	0	0
Horticulture (121)	2	0	2
Agriculture (102)	0	2	2
Dairying (162)	0	2	0
Entomology (142)	2	0	0
Military Drill (602)	3	3	3

Senior Class

THEORETICAL	1st Term	2nd Term	3rd Term
Political Economy (515)	3	2*	0
English (504)	0	2*	3
Chemistry (302)	2	2	2
Horticulture (122)	2	0	3
Agriculture (103-105)	3	3	0
Geology (111-112)	2	3	2
Bacteriology (177)	0	2	2
Botany (176)	2	0	0
Animal Husbandry (157, 153)	0	2	2
Military Science (601)	1	1	1

PRACTICAL	1st Term	2nd Term	3rd Term
Chemical Lab. (305)	6	6	6
Horticulture (122)	2	0	3
Bacteriology (177)	0	3	3
Animal Husbandry (160)	0	3	0
Botany (176)	4	0	0
Drill (602)	3	3	3

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*Political Economy ends and Senior English begins at middle second term.

COURSE IV. CHEMISTRY AND GEOLOGY

This course is intended to equip the student for engaging in manufacturing operations involving metallurgy or other branches of inorganic chemistry, or for employment as assayer or chemist in connection with mining operations. It also furnishes a basis upon which he may readily specialize in mining or geology, with a view to conducting actual mining enterprises or to employment in responsible positions on state or national surveys.

The student is well grounded in the principles of chemistry, physics, mechanics, geology and mineralogy, but the principal stress is laid on geology and metallurgical chemistry. He also acquires a valuable practical knowledge of surveying, mechanical engineering, foundry practice, drawing and designing, in addition to the pursuit of courses in English, history, political economy, and other subjects of general educational value.

The first two years of the course are the same as in the engineering courses. The third and fourth years differ chiefly in the substitution of advanced work in chemistry and metallurgy, and in geology and mineralogy for technical engineering work.

COURSE IV. CHEMISTRY AND GEOLOGY

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term	PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520, 521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522, 4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (284)	2	2	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (231)	2	2	2	Descriptive Geom. (530)	3	0	0
Civil Engineering (531)	0	2	2	Civil Engineering (531)	0	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	4	4	4	Assaying (303)	2	2	2
English (503)	2	2	2	Chemical Lab. (303)	4	4	4
Chemistry (306)	2	2	2	Mechanical Drawing (247)	2	2	2
Mineralogy (111)	2	2	2	Mineralogical Lab. (111)	2	2	2
Physics (232)	2	2	2	Physical Lab. (233)	2	2	2
Mechanism (220)	2	0	0	Military Drill (602)	3	3	3
Mechanics (221)	0	2	2				
Military Science (601)	1	1	1				

Senior Class

English (504)	0	2*	3	Chemical and Metallurgical Laboratory (311)	6	6	6
Political Economy (515)	3	2*	0	Practical Geology (116)	3	3	3
Chemistry (302)	2	2	2	Mechanical Lab. (215)	3	3	3
Metallurgy (310)	2	2	2	Military Drill (602)	3	3	3
Economic Geology (115)	2	3	4				
Geology (113)	2	2	3				
Mechanical Eng. (213)	3	3	0				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

COURSE V. MECHANICAL AND ELECTRICAL ENGINEERING

This course is designed to fit young men for positions in the various departments of these professions. It attempts, by practical and theoretical instruction, to lay a solid scientific foundation upon which the student may build rapidly after graduation. The experience necessary to make a successful engineer can not be acquired in a college course, but the technical graduate usually distances his uneducated competitors in the acquirement of practical knowledge and experience.

Within the department are taught physics, mechanics, and mechanical and electrical engineering. Along with the theoretical instruction in these subjects, practice is given in well equipped laboratories.

Shop instruction is given in carpentry, turning, and pattern-making; in moulding; chipping and filing, and the use of machine tools. The purpose of this instruction is not to turn out skilled artisans, but to train those faculties of mind which can best be reached through the work of the hand.

The work in drawing is made one of the features of the course.

Graduates from this course are filling responsible positions in various lines of mechanical and electrical engineering and in drawing.

COURSE V. MECHANICAL AND ELECTRICAL ENGINEERING

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term	PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (100)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244)	2	2	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (231)	2	2	2	Descriptive Geometry (530)	3	0	0
Civil Engineering (531)	0	2	2	Civil Engineering (531)	0	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Mechanical Drawing (245)	3	3	3
English (503)	2	2	2	Machine Shop (260)	3	3	3
Physics (232)	2	2	2	Physical Lab. (233)	3	3	0
Electrical Eng. (200)	3	3	3	Electrical Lab. (201)	3	3	3
Mechanism (210)	2	0	0	Mineralogical Lab. (111)	0	0	3
Mechanics (211)	0	2	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

English (504)	0	2*	3	Machine Shop (261)	3	3	0
Political Economy (515)	3	2*	0	Drawing & Designing (238)	3	3	3
Electrical Eng. (202)	5	5	5	Electrical Lab. (203)	3	3	3
Mechanical Eng. (213)	3	3	5	Mechanical Lab. (214)	3	3	6
Mechanics (212)	2	2	0	Military Drill (602)	3	3	3
Geology (112)	1	2	1				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

COURSE VI. CIVIL ENGINEERING.

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics, and the physical sciences. The course will also be found to embrace about the same amount of drawing, shop work, mechanical engineering and mechanical laboratory practice as the other engineering course.

The distinctive work pursued by students in this course includes the study of land surveying and plotting, topographic surveying and mapping; location, construction, and maintenance of roads, railroads, streets, and pavements; strength of materials, masonry construction, foundations on land and in water; analytic and graphic investigations of stresses in girders, roofs and bridges, and the design of these structures; the principles of hydraulics as applied to dams, reservoirs, canals, municipal water-works, and the development of water power.

For fuller details, see descriptions of instruction in these subjects.

COURSE VI. CIVIL ENGINEERING

Freshman Class

	Hours per week				Hours per week		
THEORETICAL	1st Term	2nd Term	3rd Term	PRACTICAL **	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244a)	2	2	2
Chemistry (300)	3	3	3	Chemical Lab. (301)	3	2	2
Physics (231)	2	2	2	Civil Engineering (531)	0	2	2
Civil Engineering (531)	0	2	2	Descriptive Geom. (530)	3	0	0
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Mechanical Drawing (246)	3	3	3
English (503)	2	2	2	Machine Shop (260)	3	3	3
Physics (232)	2	2	2	Physical Lab. (233)	3	3	0
Civil Engineering (532, 534)	3	3	3	Civil Eng. Field (532, 534)	3	3	3
Mechanism (210)	2	0	0	Mineralogical Lab. (110)	0	0	3
Mechanics (211)	0	2	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

English (504)	0	2*	3	Machine Shop (261)	3	3	0
Political Economy (515)	3	2*	0	Drawing & Designing (249)	3	3	3
Civil Engineering (535)	5	5	5	Mechanical Lab. (214)	3	3	3
Mechanical Eng. (213)	3	3	5	Civil Eng. Field (536-538)	3	3	6
†Mechanics (212)	2	2	0	Military Drill (602)	3	3	3
Geology (112)	1	2	1				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

**Other practical work may be substituted.

†Practical Electrical Engineering may be given in place of 2nd term Mechanics.

COURSE VII. TEXTILE INDUSTRY

The course in Textile Industry is designed to give the student sound training, both theoretical and practical, in the sciences upon which manufacturing processes are based. The curriculum of the course recognizes that in a profession of so many aspects a broad general cultivation, a liberal training in design, and a thorough knowledge of the underlying principles are necessary for its successful practice.

The first two years are taken up with a broad general training along scientific and mechanical lines, while from the beginning of the junior year the work takes on a distinctly professional character. The practical work is carried on for the purpose of developing in the student habits of accurate observation, and of bringing to his consideration not only methods of fundamental importance, but questions of economy of time, precision of results, and attention to details. Effort is made to develop self-reliance in the student, so that he may be fitted to make his way without assistance.

This course does not presume to fit one for the management of a mill, but the graduate is in possession of such information, and has acquired such experience and knowledge that he may look forward to a successful career as manufacturer, mill architect or technical chemist, provided he has the necessary energy, application and tact, and a willingness to begin at the bottom.

COURSE VII. TEXTILE INDUSTRY

Freshman Class

	Hours per week				Hours per week		
THEORETICAL	1st Term	2nd Term	3rd Term	PRACTICAL	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244)	2	2	2
Chemistry (300)	3	3	3	Chemical Lab. (301)	3	2	2
Physics (231)	2	2	2	Descriptive Geometry (230)	3	0	0
Civil Engineering (531)	0	2	2	Civil Engineering (531)	0	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Machine Shop (260)	3	3	3
English (503)	2	2	2	Chem. Lab. (303)	3	3	0
Textile Chemistry (420)	1	1	2	Dyeing Lab. (420)	0	0	3
Designing (412)	2	2	2	Weaving (410-411)	3	3	3
Carding and Spin'g (400-406)	2	2	1	Carding and Spin'g (400-406)	3	3	3
Mechanism (210)	2	0	0	Military Drill (602)	3	3	3
Mechanics (211)	0	2	2				
Military Science (600)	1	1	1				

Senior Class

English (504)	0	2*	3	Mechanical Lab. (215)	0	3	3
Political Economy (515)	3	2*	0	Carding & Spinning (400, 406)	5	3	3
Mechanical Eng. (213)	3	3	0	Dyeing (421)	3	3	3
Carding and Spin'g (407-409)	2	2	2	Weaving (410, 411)	4	3	3
Textile Chemistry (421)	2	2	2	Military Drill (602)	3	3	3
Designing (412)	2	2	2				
Cloth Analysis (414)	1	2	2				
Weaving (410-411)	1	1	1				
Jacquard Designing (413)	0	2	2				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

Special Courses

Besides students in the regular undergraduate courses, there may be farmers and others of mature age, including graduates of other institutions, who desire to avail themselves of the special privileges offered by the College. To such persons the opportunity is offered, under the advice of the director of the department in which work is contemplated, to pursue special lines of study or investigation in any of the subjects taught in the College, provided attention can be given to them without detriment to the regular classes. Such special students will be admitted after they have satisfied the director of the department that they are qualified to pursue the work with profit.

Special students are excused from military duty, but are subject to the general regulations of the College requiring good conduct and diligent prosecution of course selected They are not admitted to barracks, but rooms and board may be secured in the community at reasonable rates. They will be required to pay the usual fees, except the price of the uniform and board in barracks.

Special Course in Electrical Engineering

Students desiring to take a special course in electrical engineering should remember that no one can hope to become an electrical engineer who has not the necessary foundation in mechanical engineering, to which electrical engineering is a superstructure. Two-thirds of an electrical engineer's training must be mechanical.

No special classes will be formed.

Students desiring to enter the junior class will be expected to be prepared on elementary mechanical drawing physics and chemistry, and on mathematics through plane trigonometry. They will be expected to take with the junior class, in addition to their electrical studies, physics, mechanics, mathematics, mechanical drawing and machine shop work.

Without these additional branches the student will not be prepared for the more strictly engineering work of the senior year.

To enter the senior class, a student must be proficient in the work of the junior year, in which physics and calculus are completed.

In addition to the electrical subjects prescribed for the senior year, he must take—unless he is proficient along these lines—mechanics, mechanical engineering and laboratory, machine shop, drawing, and machine design.

Students who are not prepared, or unwilling to take the other subjects necessary to the successful study of electrical engineering, will not be permitted to take a special course in this line.

Special Cotton Grading Course

This course begins with the winter term, January 4, 1912, and continues for four weeks. All of the important cottons of the world are studied, but most of the practice is with the varieties grown in the United States, and especially those grown in South Carolina. Constant practice is given with a full line of samples—including the tinges and stains. A set of arbitration samples is used for reference and comparison. The physical properties of the fibre are studied with a microscope, and its diameter, length, strength and other spinning qualities determined. The students are given the results of experiments made by the textile students with various grades.

Special Textile Course

To meet the demands of southern conditions for a class of young men trained in the finer details of cotton manufacture, a special two-year course has been arranged to accommodate a limited number of students who may not be in a position to take the regular four-year textile course, as scheduled and described on the preceeding pages.

The course includes mathematics (beginning algebra), English, freehand and mechanical drawing, carding, spinning, weaving and designing, and is thoroughly practical and allows the greater portion of the student's time to be devoted to the pursuit of textiles in its several branches.

To pursue this course successfully the student must be well grounded in arithmetic, and should be capable of expressing his thoughts clearly in writing. The student seeking admission to this course must present himself at the College during the regular entrance examination period, September 13 to 16, 1911, and satisfy his instructors that he is prepared to undertake the work. No student will be admitted after that time. Students must be at least 18 years of age, and must have had at least one year's experience in some cotton mill. They will not be required to perform military duty, but will be subject to the general rules and regulations of the College. Students who have failed in the regular College courses will not be allowed to change to this course. No diploma is conferred upon the completion of this work, but the student receives a certificate showing that he has finished the course.

Course of Study

First Year

	HOURS PER WEEK		
	1st term	2nd term	3rd term
Mathematics (begins algebra)	5	5	5
Freshman English	5	5	5
Carding and Spinning (theory)	2	2	2
Carding and Spinning (practical)	3	3	3
Mechanical Drawing	3	3	3
Designing	3	3	3
Weaving	6	6	6
Freehand Drawing	3	3	3
	30	30	30

Second Year

Mathematics (complete geometry)	5	0	0
Sophomore English	3	3	3
Chemistry	3	3	3
Carding and Spinning (theory)	2	2	2
Carding and Spinning (practical)	6	6	6
Chemical Laboratory	2	2	2
Designing	2	3	3
Cloth Analysis and Jacquard Designing	2	3	3
Weaving	5	8	8
	30	30	30

Special Post Graduate Textile Course

This course is, in general, a continuation of the regular course with the addition of such subjects as will lead to a proper understanding of industrial affairs. Frequent discussion of the subjects treated, and wide reading on assigned topics will be special features of the course. The subjects taken up will include combing, mule spinning, mill construction and organization, assembling of machinery, Jacquard weaving, building of Jacquard harnesses, loom fixing, designing, dyeing, manufacture and technical analysis of chemicals and other products used in the textile industry, and sociology in so far as it touches upon mill life, welfare work and labor problems.

Farmers' Short Course in Agriculture

A short course in agriculture, continuing four weeks, is offered during the month of January. This course is planned especially for farmers and farmers' sons who wish to devote a short time to the study of this subject. The work will consist mainly of Agronomy and Animal Husbandry subjects, with a small amount of Horticulture, Dairying, Veterinary Science, and Entomology.

Agronomy subjects will include: plant growth, soil, fertilizers, tillage, implements, and farm crops.

Animal Husbandry subjects: breeds of animals, breeding, feeding, care of animals, and stock judging.

Any one wishing to do special work in dairying, horticulture, or cotton grading will be given the opportunity.

Two-Year Course in Agriculture

To meet a growing demand for special agricultural work the following course is outlined. This course includes the greater portion of the agriculture given to the four year students and may be scheduled with the regular classes. No English or mathematics is required in the course, but are optional and may be taken with the regular classes if the work is desired.

During the second year special attention will be given to practical work in the field, dairy, and with live stock.

Course of Study

First Year

First, Second, and Third Terms

Theoretical			
Agriculture	2	2	2
Farm Machinery	0	0	2
Economic Entomology	0	0	2
Horticulture	2	0	2
Dairying	2	2	0
Animal Husbandry	0	2	2
Veterinary Science	2	2	0
Ex. Botany	2	0	0

Practical			
Woodwork	3	3	3
Bookkeeping	2	2	2
Farm Machinery	0	0	4
Economic Entomology	0	0	3
Physiography	3	0	0
Dairying	3	3	0
Animal Husbandry	0	0	4
Veterinary Science	3	3	3*
Horticulture	2	0	2

Second Year

First, Second, and Third Terms

Theoretical			
Agriculture	3	3	2
Horticulture	2	2	3
Animal Husbandry	2	2	2
Veterinary Science	0	0	3
Economic Botany	2	0	0
Bacteriology	0	2	2

Practical			
Agriculture	4	4	3
Horticulture	2	2	0
Animal Husbandry	2	3	2
Veterinary Science	3	3	3

*Optional

Irregular Courses

Every student is required to pursue one of the regular courses, as scheduled on the preceding pages, unless for special reasons, this seems inadvisable or impracticable. In such cases an irregular course may be granted by the Faculty on the following conditions:

1. The course applied for must be such as to fully and profitably occupy the student's time.

2. The application must be accompanied by the written approval of parent or guardian and of instructors in all subjects included in the course.

3. Irregular courses are not granted to students in the preparatory class.

4. Diplomas are not issued to students in irregular courses, but a certificate of proficiency will be given when the work completed is deemed worthy of it.

A student who desires to take an irregular course will be referred to a member of the Faculty, who will advise him in reference to the character of work that is best for him to pursue. After the course has been thus arranged and approved by the Faculty, no other changes will be allowed without the endorsement of his adviser.

Preparatory Courses

If a boy is not sufficiently advanced to enter the freshman class and the President concludes that said boy has not had, and can not get, sufficient school facilities at or near his home to prepare him to enter the freshman class, then he will be allowed to enter the preparatory class. In this class thorough instruction is given in the elements of English, mathematics, history, and geography.

If a boy has had or can get sufficient school facilities at or near his home, then he must stand his examination for one of the College classes, and failing to pass the required examination for the freshman class, will not be allowed to enter the preparatory class, but must return home.

The instruction in this department is under the immediate supervision of the Headmaster, and is closely articulated with the work in the Academic Department.

The course of study is as follows:

Arithmetic, 4 hours a week; Algebra, 4 hours a week; English Grammar and Composition, 4 hours a week; Reading and Spelling, 4 hours a week; Geography, 2 hours a week; History, 2 hours a week; Penmanship, 1 hour a week.

ENGLISH GRAMMAR

Assistant Professor Sease

The course in English Grammar aims to give to the student a comprehensive knowledge of the principles of the language, and acquaints him with the elementary rules and practices of composition.

Text-book: 1910-'11: Carpenter's English Grammar. Text-book: 1911-'12: Kinard's The English Language. Book 2.

In connection with the course in English Grammar and Composition, the students of the class are also instructed in Spelling, Reading, and the Elementary English Classics.

Text-books: Gilbert's School Studies in Words. Hill's Fifth Reader; and such classics as the instructor may from time to time select: Written review work and compositions are required at stated periods throughout the session.

HISTORY

Assistant Professor Sease

The Preparatory course in History is designed to acquaint the student with the chief events in the History of the United States thereby preparing him for his work in this subject in the College classes.

Text-book: White's School History of the United States.

MATHEMATICS

Instructor Wells

In order to pursue this course successfully the student should have a good working knowledge of arithmetic through fractions.

Arithmetic

Thorough instruction is given in all the essential principles and methods of arithmetic.

The class room is supplied with apparatus for teaching compound quantities and measurements.

Text book: for 1911-'12: Colaw and Ellwood's Advanced Arithmetic.

Algebra

The work in Algebra extends through quadratics.

Text book: Wentworth's New School Algebra.

GEOGRAPHY

Instructor Wells

Thorough instruction is given in the essential principles of geography.

Text book: Redway and Hinman s Natural Advanced Geography.

Students who satisfactorily complete this course will be advanced to the freshman class. Those who fail to pass to the higher class may review the course the next session. Upon recommendation of the instructors of the department, a student in the preparatory class may be permitted, at any time during the session, to stand examinations for admission to the freshman class.

Degrees, Medals and Honors

The degree of Bachelor of Science (B. S.) will be conferred on any student who satisfactorily completes one of the prescribed four-year courses of study, as tabulated on the preceding pages, and submits an approved thesis not later than June 1st of his senior year. The course pursued is indicated on the diploma.

Distinguished Students.—Students who make an average grade of 90 per cent. or over for any session are designated as distinguished; provided, however, that the minimum grade on any subject shall not be less than 80 per cent. Their names are published in the Catalogue of the succeeding year. This honor was won by R. W. Freeman, '11; C. F. Inman, '10; F. H. Jeter, '11.

Trustees' Medal.—The Board of Trustees has established a gold medal, to be awarded annually to the best speaker among the representatives of the literary societies at Commencement. These representatives are chosen by judges selected by the societies at the annual public exercises in Memorial Hall. The medal is awarded by judges selected by the Faculty. Won in 1910 by H. S. Johnson, '10.

Literary Society Medal.—It is customary for the three literary societies to award gold medals annually for excellence in debate, oratory, and declamation. The medals for excellency in debate were won by B. H. Deason, '11, Calhoun; John E. Jenkins, '11, Columbian; J. M. Workman, '12, Palmetto.

In oratory by J. T. Crawford, '11, Calhoun; F. H. All, '11, Columbian; O. O. Dukes, '11, Palmetto.

In declamation, by F. L. Ross, '12, Calhoun; M. W. Wall, '11, Columbian; T. C. Haddon, '14, Palmetto.

The Chronicle Medals.—**The Chronicle,** the monthly magazine published by the literary societies, also usually awards three gold medals, for the best story, the best poem, and the best essay contributed by students during the year.

A Blue Silk C. A. C. Flag is awarded in June of each year to the best drilled company, and is carried by it during the succeeding year.

R. W. Simpson Medal.—A gold medal thus designated is awarded annually to the best drilled cadet in the freshman, sophomore and junior classes. This medal was won in 1910 by Cadet L. R. Blackmon, '13.

Norris Medal.—"I give $500, face value, Norris Cotton Mill stock, to the Trustees of Clemson Agricultural College of South Carolina, on condition, the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal,' to be awarded to the student of Clemson College meriting the same at graduation, under such rules and conditions as may be prescribed by the said Board of Trustees, and which medal shall have engraved on it '**Honos habet onus**' (Honors bring responsibilities)."

The medal was awarded in 1910 to W. M. Albergotti, '10.

Publication in Official Army Register.—The names of the three graduates most distinguished in the Military Department each year are published in the **Official Army Register** of the succeeding year.

The Commandant is also required to report annually to the War Department the names of the three cadets most eligible for appointment as officers in the United States Army.

Second Lieutenancy United States Army.—General Orders, No. 39, War Department, contains the following paragraph:

"The reports of the regular inspections of the colleges and schools to which officers of the army are detailed in pursuance of law as principals or instructors will annually hereafter be submitted to the general staff for its critical examination and the chief of staff will report to the Secretary of War, from the institutions which have maintained a high standard, the six institutions whose students have exhibited the greatest interest, application, and proficiency in military training and knowledge. The President authorizes the announcement that an appointment as second lieutenant in the regular army from each one of the said six institutions will be awarded to an honor graduate who has taken a military course thereat, provided that sufficient vacancies exist after caring for the graduates of the Military Academy at West Point and the successful competitors in the annual examination of enlisted men."

The term "honor graduate" signifies any graduates who would rank as one of the first five of his class.

DETAILED DESCRIPTION OF COURSES

1. Agricultural Department

Agronomy (100-108)
Geology and Mineralogy (110-117)
Horticulture (120-122)
Veterinary Science (130-137)
Zoology and Entomology (140-144)
Dairying and Animal Husbandry (150-162)
Botany and Forestry (170-176).

2. Engineering Department

Electrical Engineering (200-203)
Mechanical Engineering (210-215)
Civil Engineering (530-538)
Physics (230-232)
Drawing and Designing (240-249)
Forge and Foundry Work (250-252)
Machine Work (260-261)
Woodwork (270-272)

3. Chemical Department

Chemistry (300-306)
Metallurgy (310-311)

4. Textile Department

Carding and Spinning (400-409)
Weaving and Designing (410-414)
Textile Chemistry and Dyeing (420-421)

5. Academic Department

English (500-504)
History and Political Economy (510-515)
Mathematics (520-527)
Bookkeeping (540)

6. Military Department

Military Science and Tactics (600-602)

AGRICULTURAL DEPARTMENT

Prof. Perkins, Director

AGRONOMY

Prof. Perkins
Assistant Professor Napier

100. Elementary Agriculture

Freshman Class; First, Second and Third Terms

This course is outlined to serve as an introduction to the regular Agricultural Course and especially to give a comprehensive view of the subject to students in the Textile and Engineering Departments and to those who will not be in College longer than one year. The object is to familiarize the students with the simpler principles of plant growth, soils, fertilizers, farm crops, and animal husbandry.

101. Farm Mechanics

Sophomore Class; Third Term

Courses I, II, III

A detailed study of the farm implements, the history of their development, material of which manufactured, work accomplished. The object of this course is to familiarize the students with the latest improvements in farm machinery and especially to impress upon them the saving of labor effected by its use. This will be given both in field and in laboratory.

102. Soil Physics

Junior Class; Second and Third Terms

Courses I, II, III

A study of the physical properties of soils embracing a consideration of the physical composition of soil, soil texture, soil structure, aeration, temperature, and action towards the water sppply, with all modifications of these properties by farm practice: given by text book, lecture and in laboratory.

103. Soil Fertility

Senior Class; First Term

Courses I, II, III

A study of the plant food requirements of soil, farm manures, commercial fertilizers and crop rotations in their relations to soil fertility, with practical work in the field and laboratory.

104. Farm Crops

Senior Class; First Term

Courses I, II, III

A study of cotton and cereal crops, their growing, handling, and breeding. Laboratory and field work.

105. Farm Management

Senior Class; Third Term

Courses I, II

This course will include such topics as "the choice of lands for farming;" "location and character of buildings;" "kinds of farming;" "methods of controlling labor;" "stocking a farm" and other economic questions affecting southern agriculture.

106. Farm Crops

Junior Class; Third Term

Courses I, II, III

A course in the study of the principal legumes and grasses, their growing, handling, and improvement. Seed-testing.

GEOLOGY AND MINERALOGY

Prof. Calhoun

110. Elementary Mineralogy

Junior Class; Courses IV, V

This course consists of laboratory study of the common economic and rock-making minerals, the common rocks, and the various natural structural materials. The physical properties of minerals will be studied and practice will be given in determination of unknown specimens of both minerals and rocks.

111. Mineralogy

Junior Class; Courses II, IV

A comprehensive course in crystallography, physical and chemical mineralogy, and systematic descriptive and determinative mineralogy. Crystallography is taught by lectures and text-book, with laboratory work on the collections of models and natural crystals; also physical, optical, and chemical properties of minerals, and descriptive mineralogy, covering the more important mineral species Much of the laboratory work is devoted to the determination of minerals by means of their physical and chemical properties, by comparison with labeled specimens of the systematic collection, and by the use of unlabeled collections for practice in identifying minerals at sight. This course gives a sufficient knowledge of mineralogy for the geologist, metallurgist, mining engineer, or chemist, and will enable the student to readily identify all but the rarer minerals.

112. Elementary Geology

Senior Class; Courses I, II, III, V, VI

In courses I, II and III the influence of geologic phenomena on man is emphasized, particularly in the study of rock decomposition, formation of soils, processes of erosion and deposition and the resultant topographic forms. Topographic, geologic, and soil maps are studied and throughout the course the relation of geology to agriculture is emphasized. In courses V and VI the relation of geology to engineering problems is presented. Special emphasis is laid upon dynamic and structural geology. Geological maps, folios, and models are used. Structural materials such as clays, sands building stones, etc., are given careful attention.

113. General Geology

Senior Class; Course IV

A broad course in the elements of general geology. Special stress is laid on structural and dynamical geology in their relations to the formation of rocks and rock-structures, the metamorphism of rocks, and the deposition of minerals and ores. In historical geology special attention is given to the development of the North American continent.

114. Economic Geology

Senior Class; Course IV

A general survey of geological products of value, including metallic and non-metallic minerals, and building stones; their origin and nature, distribution, modes of occurence, and methods of exploitation. The course deals particularly with the economic deposits of North America, with briefer reference to those of other countries for purposes of comparison and for the elucidation of problems of origin, exploitation, etc. The student is required to read and prepare abstracts of the more important monographs and reports.

115. Practical Geology

Senior Class; Course IV

Field study and reports of geological process and phenomena, rocks and rock-structures, both original and secondary, accompanied by laboratory exercises by means of specimens, models, photographs, maps and sections; interpretation and representation of geologic phenomena, and training in the principles and methods of geological surveying, the construction of geological maps and sections, and the preparation of reports.

117. Physiography

Sophomore Class; Courses I, II, III

A laboratory course designed to give the student an adequate conception of the use of the meteorological instruments, weather maps, soil making minerals and rocks, soil types of state, and various other elementary meteorological and geological principles.

For description of equipment, see page 34.

HORTICULTURE

Associate Professor Thompson

Instruction is given in the Junior and Senior Classes. The theoretical work is illustrated by practical exercises in the garden, orchard, vineyard, greenhouse, and ornamental grounds of the College. These practical exercises enable the student to become familiar with all details of the work.

120. Principles of Horticulture and Plant Propagation

Junior Class; Courses I, III

In this course instruction is given both by lectures and text book, and special attention is given to the practical work. The subjects considered are seed sowing, seed testing, propagation by cuttings, layers, budding, grafting, and pruning.

121. Olericulture—Vegetable Gardening

Junior Class; Courses I, II, III

The work in this course covers all phases of garden work, but special emphasis is given to the home garden. The subjects considered are the following: construction, care, management, and uses of hot beds and cold frames, laying out gardens, preparation of soil, fertilizing, seed sowing, transplanting, cultivation, and treatment for diseases and insects. Text-book: Newman's Southern Gardener's Practical Manual.

122. Landscape Gardening

Senior Class; Courses I, II

The subjects considered in this course are propagation and care of flowering, plants, bedding plants, shrubs, and laying out and planning home grounds, school grounds, parks, etc.

123. (a) Principles of Horticulture. (b) Fruit Growing

Junior Class; Course II

This course is planned for those students who do not devote much time to horticultural subjects. The work includes general principles of horticulture, the selection of site, the preparation of land buying trees, and general cultural methods applied for the home orchard.

124. Pomology—Fruit Growing

Senior Class; Courses I, III

The subjects included in this course are: selection of site for both commercial and home orchards, the laying out of orchards, preparation of soil, selection of varieties, methods of culture, fertilizing, pruning, spraying, and a study of the fruit. It is the aim of this course to give the student instruction on all the common fruits of the temperate zone.

125. Greenhouse Construction, Greenhouse Management, and Floriculture

In this course lectures are given on the construction and care of hot beds and cold frames, construction, heating of, and care of greenhouse, the propagation, soil requirements, and general care of all greenhouse and house plants.

For description of buildings, grounds and equipments, see page 32.

VETERINARY SCIENCE

Associate Professor Powers
Assistant Professor Feeley

130. Veterinary Anatomy

Junior Class; Course I, II.

An elementary course including study of the skeleton, principal articulations, muscles of locomotion, etc., arranged as an introduction to the study of the principles of stock judging and physiology.

131. Physiology

Junior Class; Course I, II

This course includes the physiology of the circulatory, respiratory, digestive, urinary and generative organs; the lymphatic circulation and nervous system.

133. Physiological Demonstrations

Junior Class; Course I, II

A laboratory course in chemical physiology.

Text-book: A. Fish's "Exercises in Physiology."

134. Sporadic Animal Diseases

Senior Class; Course II

A brief course in the non-contagious diseases of farm animals, special attention being given to cause prevention.

135. Contagious Animal Diseases

Senior Class; Course II

In this course the relation of diseases of animals to the health of man is considered, and the bacteriology, modes of transmission, symptoms, cause, prevention, and treatment of the diseases common to man and animals are studied. Especial attention is given to the contagious diseases most common in this state.

136. Veterinary Clinics

Senior Class; Course II

A free clinic is held at the veterinary hospital every Monday afternoon of the session. These clinics are liberally patronized by the stockmen of the surrounding country, and the material thus secured affords practical work in the surgery and the treatment of diseases. Many patients are kept in the hospital for treatment.

ZOOLOGY AND ENTOMOLOGY

Associate Professor Conradi
Assistant Professor Gee

The work of instruction in this division consists of lectures, recitations, laboratory and field work. The work of the first two terms consists of general zoology, and is intended to be a foundation course upon which the following work in applied zoology is based.

Owing to the varied activities of this Division, including the Station laboratory and field work, the State entomological and plant quarantine work, and the systematic work of the museum, the student has ample opportunity to become familiar with the methods with which these various activities are operated. It enables the student to obtain an insight into practical field, orchard, garden and forest entomology. Ample opportunity is offered the student to familiarize himself with organization and investigation methods.

140. General Zoology

Sophomore Class; Courses I, II, III

This course consists of a study of the fundamental principles of life, including structure, habits and life history of invertebrate and vertebrate animals. Special emphasis is given the economic aspect, lectures and laboratory dissentions of type forms.

141. Economic Entomology

Sophomore Class; Courses I, II, III

The work of this term consists of lectures and laboratory work. Lectures are given on the general principles of insect control, and consist of a study of vulnerable points in insect structure and habits, a study of mechanical control methods and spraying, and a full consideration of farm, garden and orchard management for controlling injurious insects. The lectures are supplemented in the laboratory with the careful study of insect structure and transformations, and the study of insecticides and spray machinery.

143. Economic Entomology

Junior Class, Courses I, II and III (Fall term.)

A practical study of field crop insects and the methods for controlling them.

142. Economic Entomology

Senior Class, Course I

A practical study of orchard and garden insects and the methods for controlling them.

ANIMAL HUSBANDARY AND DAIRYING

Associate Professor Smith
Associate Professor Nourse
Assistant Professor Burgess

150. Types of Cattle, Horses and Mules

Junior Class; Courses I, II, III

Market and breed types of dairy and beef cattle; their origin and history. Types and breeds of horses and mules.

152. Types of Sheep and Hogs

Junior Class; Courses I. II, III

Breed and market types of sheep and hogs; their origin and history.

153. Principles of Breeding

Senior Class; Courses I, II, III

Principles of breeding, including selection; heredity; atavism; variation; fecundity; methods of breeding; in and in breeding; line breeding, etc.

154. Stock Judging and Pedigree Work

Junior Class; Courses I, II, III

Judging dairy and beef cattle, sheep, hogs, horses, and mules, and score card practice.

155. Care and Management of Farm Ainmals

Junior Class; Course II

Care and management, housing and feeding farm animals.

157. Stock Feeding

Senior Class; Courses I, II, III

Stock feeding, including composition and digestibility of feeding stuffs; their preparation, use and cost; nutritive ratio; digestion, etc. The available food stuffs of the South are discussed at length.

160. Compounding Rations

Senior Class; Courses I, II, III

161. Milk and its Products

Junior Class; Courses I, II, III

It is the object of this course to give the student thorough knowledge of the sanitary conditions necessary to produce and handle milk; pasteurization; milk testing; dairy machinery; manufacture of butter, cheese and ice cream, and marketing.

162. Practical Work in Creamery

Junior Class; Courses I, II, III

Cream separation and ripening; pasteurization of milk and cream; bottling milk; butter and cheese making; milk testing; butter and cheese scoring.

163. Practical Work in Animal Husbandry and Dairying

Senior Class; Course II

In order that students may learn every detail pertaining to the practical working of the dairy and feeding problems, all members of the Animal Husbandry section of the senior class will be required to act as foreman of the barns and dairymen and butter makers at the dairy building, for a period of at least one week, details of which will be arranged to meet requirements of the seasons, and the number of students that may be required in each squad.

The students will be expected to perform all operations incidental to these duties, with the regular herdsman and dairyman present to make suggestions and answer suggestions.

BOTANY, FORESTRY AND BACTERIOLOGY

Associate Professor Hall
Instructor Massey

171. Elementary Phanerogamic Botany

Freshman Class; Courses I, II, III

A preliminary practical phanerogamic course consisting of the morphological study of Angiosperms. The students have access to a very full line of fresh and preserved botanical material when the course demands its use.

Text-book: Bergen & Davis' "Principles of Botany."

172. Elementary Cryptogamic Botany

Sophomore Class; Courses I, II, III

A course in the study of Algae, Fungc, Bryophytes, Pteridophytes and Gymnosperms. The work is almost entirely microscopical. The students will secure some material from the field for study, although much will be furnished in the laboratory.

Text-book: Chamberlain's Methods.

174. Systematic Botany

Sophomore Class; Courses I, II, III

A course in the taxonomic and ecological features of this region with a laboratory and field study of the main types of Angiosperms. From 50 to 100 plants are here identified and classified.

Text-book: Gray's New Manual of Botany.

175. Elements of Forestry

Junior Class; Courses I, II, III

A lecture, field, and laboratory course dealing with the general principles of forestry, together with the practical methods applied in lumbering, forest propagation and conservation.

Text-book: Green's Principles of American Forestry.

176. Plant Pathology

Senior Class; Courses I, III

A systematic study of fungi with special reference to species causing diseases of economic plants. The students are taught to recognize the more common diseases, particularly in the early stages; and the whole question of prevention and practicable remedies is fully discussed. Methods of isolating artificially cultivating, and inoculating with disease causing organisms will be considered.

177. Introductory Bacteriology

Senior Class; Courses I, II, III

A brief study of the general character, habits and work of bacteria is followed by practical work in growing, mounting and determining them. Soil and dairy bacteria are given special attention. The principal bacterial contagious diseases and methods of prevention are considered briefly in the class work.

178. Animal Bacteriology

Senior Class; Courses I, II, III

This course treats of dairy bacteriology more in detail, and in addition some time is spent in the study of disease prducing forms The principal contagious bacterial diseases of animals are studied.

This course is open only to those who have completed the introductory course in Bacteriology.

ENGINEERING DEPARTMENT

Vice-Director Earle

ELECTRICAL ENGINEERING

President Riggs
Assistant Professor Dargan

200. Electricity and Magnetism

Junior Class; Course V

Principles of Electricity and Magnetism, instruments, wiring calculations, incandescent lighting, direct current motors and generators, etc.

Text-books: Thompson's "Elementary Lessons in Electricity and Magnetism." Jackson's "Elementary Electricity and Magnetism." Riggs' and Dargan's "Mimeographed Notes and Problems."

201. Electrical Laboratory

Junior Class; Course V

Experimental verification of the fundamental laws of Electricity and Magnetism, including the measurement of current, resistence, electromotive force, capacity, permeability, the tests and calibration of instruments, operation of direct current motors and generators, etc

Text-book: Riggs. Kyser and Dargan's "Electrical Laboratory Experiments."

A number of the best books on laboratory practice are available for reference.

The student is required to study the theory as well as the manipulation of the experiments, and to express his complete study of each experiment in a carefully prepared written report.

202. Dynamo Electric Machinery

Senior Class; Course V

First Term: Study of the design of direct current dynamo-electric machinery. Second and third terms: Study of alternating currents and their application to light and power. Special attention is directed to polyphase system and apparatus.

Text-books: Franklin and Esty's Elements of Electrical Engineering; Franklin's Alternating Currents and Alternating Current Machinery; Riggs' Dynamo Design.

Note.—A complete dynamo design, with full set of drawings, is required as part of Course 202 in Electrical Engineering, and Course 238 in Mechanical Drawing.

203. Electrical Laboratory

Senior Class; Course V

Care, management and testing of arc and incandescent generators, direct current generators, motors and of single and polyphase machinery and apparatus.

Text-book: Riggs' Electrical Engineering Experiments.

For description of buildings and equipment, see page 38.

MECHANICAL ENGINEERING

Associate Professor Earle

210. Mechanism

Junior Class; Course IV, V, VI, VII

Spur, bevel, and screw gearing, belt gearing; lobed and elliptic wheels; epicylic trains; escapements; rachet motions; link motions; quick return motions; cam motions.

Text-book: Stahl and Wood's Mechanism.

211. Mechanics

Junior Class; Course IV, V, VI, VII

Motion, force, velocity, force system, moments of force, general principles and methods of solving problems both analytically and graphically.

Text-book: Maurer's Technical Mechanics.

212. Mechanics

Senior Class; Courses V, VI

Two hours per week during the first two terms are given to the study of pure mechanics, center of gravity, moments of inertia, work, energy, power, elasticity, resilience, strength of engineering materials, and hydraulics.

Text-book: Maurer's Technical Mechanics.

Note: Two hours practical Electrical Engineering may be given in place of second term Mechanics.

213. Mechanical Engineering

Senior Class; Courses IV, V, VI, VII

Study of the design and construction of steam boilers, heaters, pumps and injectors; theory of simple, compound and triple expansion steam engines; gas and gasoline engines; hot air engines; air compressors and motors; ice and refrigerating machinery; transmission of power; specifications and the law of contracts. Theory of the strength of engineering materials. Graphical and analytical solution of problems.

Text-book: Creighton's Steam Engine and Other Heat Motors.

214. Mechanical Laboratory

Senior Class; Courses V, VI

Study, use and calibration of water-meters, weirs steam gauges, indicators, dynamometers, calorimeters; tests of fuel and lubricants; tests of building materials, as iron, wood, brick, cement, etc.; setting the valves of the plain slide-valve and automatic cut-off steam engines; indicator practice; horsepower and efficiency of steam, gasoline and hot-air engines and air-compressors and motors; efficiency trials of steam boilers; duty trial of steam pump and of College pumping engines.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

215. Mechanical Laboratory

Senior Class; Courses IV, VII

Study, use and calibration of steam gauges; indicators; calorimeters; tests of building material, as iron, wood, brick, cement; setting the valves of plain and slide-valve and automatic cut-off engines. Practice in running and testing water motors; steam engines; gasoline engines; pumps, firing and testing of steam boilers.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

CIVIL ENGINEERING

Professor Houston
Assistant Professor Sweeney

530. Descriptive Geometry

Sophomore Class; Courses IV, V, VI, VII

Study of the representation of points, lines, planes, surfaces and solids, and of their relations; tangencies, intersections and developments; numerous original exercises.

Text-book: Low's Practical Solid or Descriptive Geometry.

531. Plain Surveying

Sophomore Class; All Courses

This course includes the general principles and fundamental operations of surveying with compass, level, and transit. The field work includes actual surveys of tracts of land, of which the acres are computed and plats are drawn. Experience is given in problems of laying out and dividing up land, and in locating irregular boundaries. Practice is also had in section and differential leveling.

Text-book: Breed and Hosmer's Vol. 1. Principles and Practice of Surveying.

532. Higher Surveying

Junior Class; Course VI

Use and adjustment of transit, stadia, solar compass, and plane-table topographic surveying with transit and stadia; railroad topography; triangulation; city and hydraulic surveying; mine surveying; geodetic surveying; map and plan drawing; topographical symbols; photographic surveying, etc.

Text-book: Breed and Hosmer's Vol. 1. Principles and Practice of Surveying.

533. Railway Engineering

Junior Class; Course VI

Preliminary and location surveys; location from contour maps; laying out of simple and compound curves; setting of slope stakes; computation of earthwork; switches, turnouts; theory of economic location; effects of grades, curves and length upon the cost of operation.

535.-538. General Civil Engineering

Senior Class, Course VI

This course includes a study of building materials, mechanics of construction, derivation of practical formulas, masonry construction, foundations on land and in water, stability of walls and arches, analytical investigation of stresses in various forms of roof trusses and bridges, the field and office work in railroad construction, location and construction of country roads and city pavements, hydrostatics, motion of water in pipes and channels, determinations of discharge of streams by current meter and weirs, water power developments, water supply and the disposal of sewerage. In addition, the student is required to hand in a thesis on some engineering work. This necessitates additional field work, and outside study. The College Library furnishes valuable books of reference.

Text-books: Fiebeger's Civil Engineering. Merriman and Jacoby's Roofs and Bridges, Vol. 1. Railway Construction.

PHYSICS

Associate Professor Poats

The study of physics is begun in the Sophomore year, and completed in that year by students taking agricultural and textile industry.

All other students take physics, both theoretical and practical, in the Junior year.

The teaching is by lectures and experiments interspersed with quizzes, exercises, and monthly reviews.

In the physical laboratory the student makes for himself the experiments of a general laboratory course. These experiments serve to further impress the theoretical principles upon the mind and to show the bearing of the subject upon practical matters in general.

230. Principles of Physics

Sophomore Class; Courses I, II, III

A complete course in the principles of physics with applications to things in nature and the arts.

Text-book: Millikan & Gale's First Course in Physics.

231. General Physics

Junior Class; Courses IV, V, and VI

Properties of matter, physical measurements, mechanics of solids fluids, and molecules, work, mechanical energy, and heat.

Text-books: Millikan & Gale's First Course in Physics, Professor's Lectures and Notes.

232. General Physics

Junior Class; Courses IV, and V

Electricity and magnetism, heat, sound, and light.

Text-books: Reed & Guthe's College Physics, Prfessor's Lectures and Notes.

233. Physical Laboratory

Junior Class; Courses IV, and V

Experimental investigation of the physical properties of matter, and the verification of the laws of mechanics, heat, sound, light, electricity and magnetism.

For description of equipment, see page 42.

DRAWING AND DESIGNING

Associate Professor Lee
Assistant Professor Klugh
Instructor Birch
Instructor Harris

Throughout the course the best methods of work pursued in the drafting rooms of workshops and manufacturing establishments are given.

420. Freehand Drawing

Freshman Class; All Courses

Graded exercises in sketching from geometrical models, plaster casts, machine parts and other objects in pencil and ink, particular attention being paid to outlines and perspective.

242. Mechanical Drawing

Freshman Class; Courses IV, V, VI, VII

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; conventional section and shade lines; working drawings of simple parts of machines, from sketches and models, tracing and blue printing.

243. Mechanical Drawing

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; plans and elevations of farm buildings, tracing and blue printing.

244. Mechanical Drawing

Sophomore Class; Courses IV, V, VII

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines or parts of machines from sketches and specifications. Elementary principles of machine design; construction and screw threads; proportioning of bolts and nuts, tracing and blue printing.

244a. Mechanical Drawing

Sophomore Class; Course VI

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines; topographical drawing.

245. Mechanical Drawing

Junior Class; Course V

Practical problems in mechanism. Lobed and elliptic wheels; spur and bevel gearing; cams; link motion; quick return motion;

belt gearing; coupling; riveting, etc.; tracing and blue printing.

246. Mechanical Drawing

Junior Class; Course VI.

First half same as Course 245; platting; topographical drawing; tinting; railroad and map drawing; plans and details of buildings.

247. Mechanical Drawing

Junior Class; Course IV

First half same as Course 245. Second half, drawing of furnace designs and other metallurgical appliances.

248. Machine Design

Necessary drawings for work under construction in the shops; details of steam and gas engine and electrical machinery. Design drawing required in graduation thesis.

249. Mechanical Drawing

Senior Class; Course VI

Railroad and map drawing; plans and details of bridges and buildings. Design drawing required in graduation thesis.

FORGE AND FOUNDRY

Assistant Professor Gantt
Instructor Allison

250. Forge Work

Freshman Class; All Courses

Study of Buffalo down-draft forges; graduated exercises, embracing fundamental operations of forging, such as upsetting, bending, punching, twisting, welding, etc. Part of third term is devoted to working with tool steel, involving processes of annealing, hardening, tempering, etc.

251. Foundry Work

Names and uses of molders' tools; tempering and working of molding-sand; making and patching of molds. Work with patterns of various shapes and sizes, illustrating the principles of venting, gating, coring, etc. Grading and mixing of iron; charging and operating cupola. Several weeks are devoted to work in brass molding. The practical instruction is supplemented by a course of lectures covering the various phases of foundry work.

252. Forge Work

Freshman Class; Courses I, II, III

Study of Buffalo down-draft forges. Short course, embracing fundamental operations of forging.

For description of equipment, see page 45.

MACHINE SHOP

Assistant Professor Howard

260. Machine Shop

Junior Class; Courses V, VI, VII

Bench work in chipping, filing, scraping, and polishing is begun first. Students are given instruction in the proper handling of the hammer and chisel, grinding the chisel and chipping cast iron.

They are then required to work a casting to dimensions and quality of finish indicated on a drawing furnished them.

After this chipping is completed, the same casting is filed to flat surfaces, which process is followed by scraping to surface plate and by polishing.

Students are next advanced to lathe work, simple pieces of lathe work being given first.

Practice is given in turning, boring, threading, filing, and polishing, very accurate measurements with both spring and micrometer calipers being required.

From lathe work, the student progresses through the various processes of drilling, shaping, planing, milling and grinding.

Each student is required to do his own tool grinding.

261. Machine Shop

Senior Class; Courses V, VI

The work in the Senior year consists in the building of small machines, such as gasoline engines, electric motors, generators, etc., from carefully worked out designs supplied to the students, this work being done under the close supervision of the instructor in charge.

This machine building involves general machine work, and covers the whole field of operations.

The parts of these machines are very carefully checked, and work falling outside the close limits of error is rejected.

These machines become the property of their builders by payment of the price of material used in their construction.

WOODWORK

Assistant Professor Gardner
Instructor Folk

The course in woodwork does not aim to make the student a skilled workman, but rather to teach the proper use of tools, at the same time training the hand and the eye, to impress the importance of marking the exact dimensions, and to induce the proper reasoning necessary to reach a desired end.

The course covers two years, advancing through elementary principles and practice to pattern making, where a series of exercises teaches the fundamental principles. Then large patterns of machines under construction are undertaken, giving the student opportunity to learn commercial shop methods, and to apply intelligently all the principles of pattern making.

270. Woodwork

Freshman Class; Courses IV, V, VI, VII

Use, care and sharpening of tools, exercises to teach use of planes, saws, chisels, squares, etc.

Advanced exercises involving dove-tailing, glueing and polishing. Also full course with face plate and chucking work.

271. Woodwork

Freshman Class; Courses I, II, III

The work is given for two terms only, and is very much the same as course 270, except that general principles are substituted for some of the details.

272. Woodwork—Pattern Making

Sophomore Class; Courses IV, V, VI, VII

The principles of pattern making are taught with special exercises. Then large and complicated patterns of machines under construction are undertaken, and the large machines in the planing shops are explained and used as needed. Cabinet and furniture making are taken up to gain the use of machines not needed in pattern work.

CHEMICAL DEPARTMENT

R. N. Brackett, Acting Director

CHEMISTRY

Acting Professor Brackett

Acting Associate Professor Henry
Assistant Professor Lipscomb
Assistant Professor Smith

300. General Chemistry

Sophomore Class; All Courses

Inorganic Chemistry.

Text-book: Newell's Inorganic Chemistry for Colleges.

301. Chemical Laboratory

Sophomore Class; All Courses

Introductory work and qualitative analysis.

Text-book: Jones' Junior Course in Practical Chemistry.

302. Industrial Chemistry

Senior Class; Courses III and IV

The applications of chemistry in the more important arts and manufactures. Among the subjects studied are: sulphuric acid; soda chlorine; potash salts; fertilizers; lime; mortar and cements; glass; porcelain; illuminating gas; coal tar; mineral oils; vegetable and animal oils; soap; fermentation industries, etc.

Text-book: Thorp's Outlines of Industrial Chemistry.

303. Chemical Laboratory

Junior Class; Courses I, II, III, IV, VII

Qualitative and quantitative analysis. Assaying is given in the metallurgical course.

Books used: Jones' Junior Course in Practical Chemistry; Fresenius' Qualitative and Quantitative Analysis; Lincoln and Walton's Quantitative Analysis; Notes on Assaying.

304. Agricultural and Organic Chemistry

Junior Class; Courses I, II, III

The composition of plants, the sources of plant food, the composition of soils, the improvement of soils by chemical means, the composition and manufacture of fertilizers; and the leading facts and principles of organic chemistry.

Text-books: Johnston's Elements of Agricultural Chemistry, edited by Cameron and Aikman. Moore's Outline of Organic Chemistry.

305. Chemical Laboratory

Junior Class; Courses I and II

Senior Class; Course III

Quantitative analysis of fertilizers, soil, ashes of plants, water cattle foods and dairy products.

Books used: Bulletins of United States Department of Agriculture, containing analyses adopted by the Association of Official Agricultural Chemists; Lincoln and Walton's Quantitative Analysis.

306. Physical Chemistry

Junior Class; Course IV

Text-book: Jones' Introduction to Physical Chemistry.

METALLURGY

Acting Associate Professor Henry

310. Metallurgy

Senior Class; Course IV

Text-books: Sexton's Elementary Text-book of Metallurgy. Hiorn's Mixed Metals; Notes on Alloys.

311. Chemical and Metallurgical Laboratory

Senior Class; Course IV

For description of buildings and equipment, see page 45.

DEPARTMENT OF TEXTILE INDUSTRY

Professor Doggett Director

CARDING AND SPINNING

Assistant Professor Taylor

400. Raw Material; Cotton Grading

Junior Class; Course VII

Study of the physical properties of cotton to ascertain the grade, length of staple, and general spinning qualities. The effects of temperature and humidity on fibers.

401. Opening and Mixing

Junior Class; Course VII

Reasons for opening and mixing. When and how to open and mix. Effects of blending on the resultant yarn.

402. Picker Room

Junior Class; Course VII

Arrangement of machinery; construction; setting and speeds for various lengths of fibers; calculations.

403. Carding

Junior Class; Course VII

Purpose of carding; construction and comparison of different types; grinding, with practice in making all settings; erections and calculations for changing yarns and speeds.

404. Railway Heads and Drawing Frames

Junior Class; Course VII

Purpose, use, construction; comparison of the leather covered rolls with the metallic rolls. Settings and calculations.

405. Fly Frames

Senior Class; Course VII

Slubber, intermediate, fine roving, and jack frames; construction, care and operation. Calculations for draft, twist, lay tension and other gears.

406. Yarn Manipulation

Senior Class; Course VII

Twisting, reeling, spooling, beaming, and slashing; the mixing of size for various kinds of yarns.

407. Combing

Senior Class; Course VII

Silver lap machine; ribbon lap machine; comber; construction, operation and care of each, with practice in adjusting and tuning.

408. Spinning Frames

Senior Class; Course VII

Construction, comparison and operation of the leading types of modern ring spinning frames; coarse, medium, and fine numbers spun; calculations for the various change gears and constants.

409. Spinning Mules

Senior Class; Course VII

A study of the construction; practice in operating and adjusting; uses of mule spun yarns; calculations for all necessary changes.

Text and Reference Books: Monie's Sizing and Sizing Compounds; Nasmith's Student Cotton Spinner; Taggart's Cotton Spinning; Tompkins' Cotton Mill Processes and Calculations.

WEAVING AND DESIGNING

Assistant Professor McSwain

140. Hand Loom Weaving

Junior Class; Course VII

The work in hand-loom weaving is parallel with the course in designing for the first term of the session. The student is required to produce on the loom most of the elementary designs made in designing.

411. Power Loom Weaving

Junior and Senior Classes; Course VII

Power loom weaving is taken up at the beginning of the second term in the Junior year, and includes a study of the construction and "fixing" of cam looms for two, three four and five harness work. A study is also made of the construction and operation of automatic looms, Dobby shedding engines, box motions, leno attachments and Jacquards.

412. Designing

Senior Class; Course VII

The course in designing includes the study and construction of the foundation, derivation and combination weaves used for the construction of single and double cloths; and the making of drawing-in and chain drafts for the same.

Instruction is also given in color designing for textile fabrics; chenille, swivel, lappet and pile fabric designing and weaving.

413. Jacquard Designing

Senior Class; Course VII

Method of building Jacquard harness for straight-through, point and combination tie-ups for fabrics of different design and construction; methods of laying out figures and enlarging sketches for design.

414. Cloth Analysis

Senior Class; Course VII

Methods of finding the counts of yarn in any sample of cloth; determining the construction, weave and weight of any samples so as to produce the same or to find the cost of material in the fabric.

Text and Reference Books: Fox's Mechanism of Weaving; Holmes Cotton Cloth Designing; Ivey's Loom Fixing; Posselt's Technology of Textile Design; Posselt's Jacquard Machine Analyzed and Explained.

TEXTILE CHEMISTRY AND DYEING

Professor Doggett

420. Textile Chemistry

Junior Class; Course VII

Manufacture, properties, technical analysis and application of the more important inorganic chemicals used in the textile industry; general principles of synthetic organic chemistry.

The processes used in the laboratory course in illustration are based so far as possible upon the methods used on the large scale.

Text-book: Olney's Textile Chemistry and Dyeing.

421. Dyeing

Senior Class; Course VII

Chemistry of textile fibres; bleaching, dyeing, printing and finishing; Synthetic dyestuffs, their manufacture, properties, identification, application. The laboratory course includes bleaching, dyeing, calico printing; the preparation of representatives of the different classes of dyestuffs.

Text-books: Cohen's Theoretical Organic Chemistry; Doggett's Laboratory Notes on Textile Chemistry.

Reference Books: Schultz and Julius' Organic Coloring Matters; Allen's Commercial Organic Analysis; Georgievic's Chemical Technology of Textile Fibers; Knecht, Rawson and Rosenthal's Manual of Dyeing; Matthews' Laboratory Manual of Dyeing and Textile Chemistry.

ACADEMIC DEPARTMENT

ENGLISH

Professor Furman
Associate Professor Daniel
Assistant Professors Keitt, Bryan, Bradley

The purpose of the course in English is to enable the student to acquire the power to express his thoughts with clearness, precision and force; and to cultivate in him a taste for good literature. Elementary English grammar and the rudiments of composition are taught in the preparatory class.

501. English Grammar

Freshman Class; All Courses

A review of the subject of grammar introduces the work of this class. Constant drill is given in theme writing, pupils being expected to make use of the College Library under direction of instructors. Methods of using dictionaries, encyclopaedias, and other reference books are explained practically to the students. Full supplementary readings are required, and practice is given in the writing of abstracts of books so read.

Text-books: Emerson-Lockwood's Composition and Rhetoric; Buehler's Practical Exercises in English; Webster's Academic Dictionary, and such English classics as may be assigned.

502. Composition, Rhetoric, American Literature

Sophomore Class; All Courses

The study of composition and rhetoric is pursued throughout the year, with special emphasis laid on practical composition. Carefully written themes are required weekly. The course in American literature includes a consideration of the development of American literature, brief biographies of the leading authors, and a careful study of selections from their chief works. The course of parallel reading is taken from both American and English writers.

Text-books: Wooley's Hand-Book of Composition, and Painter's Introduction to American Literature.

503. English Literature

Junior Class; All Courses

The work in the Junior class begins with the critical study of Macauley as an essayist. This is followed by a general course in English literature. Pancoast's English Literature is the textbook, this work being supplemented by lectures. Monthly essays are required, and frequent oral readings, embracing selections from the principal English authors from Chaucer to the present time.

504. Studies in Shakespeare

Senior Class; All Courses

This class is given instruction in the principles of literary criticism. A somewhat full course in Shakespeare study is furnished. Several plays are read in class, the students being orally examined on all questions, grammatical, historical and ethical, which arise in the study of this author. Monthly essays are required.

HISTORY AND POLITICAL ECONOMY

Professor Morrison

Assistant Professor Holmes

The course includes South Carolina History, Commercial Geography, General History, United States History, Civics, and Political Economy.

The method of instruction is a combination of the text-book and lecture methods, with parallel reading as far as practicable under the instructor's direction. The class rooms are supplied with globes, charts, maps, and works of reference, in the use of which the young men are carefully trained. The students make liberal use of the many volumes of poetry, historical romance, biography and history found in the College Library.

The history of the State, of the South, and of the United States receive special attention. "A people that takes no pride in the noble achievements of a remote ancestry will never achieve anything worthy to be remembered by remote descendants."

511. South Carolina History

Freshman Class; All Courses

Text-book: Weber's History of South Carolina.

512. Commercial Geography

Freshman Class; All Courses

Text-book: Olin's Commercial Geography.

514. General History

Sophomore Class; Courses IV, V, VI, VII
Junior Class; Courses I, II, III

Text-books: Wolfson's Essentials in Ancient History; Harding's Essentials in Mediaeval and Modern History.

United States History

Sophomore Class; Courses IV, V, VI, VII
Junior Class; Courses I, II, III

Text-book: Hail's Essentials in American History.

513. Civics

Sophomore Class; Courses IV, V, VI, VII
Junior Class; Courses IV, V, VI, VII

Text-book: Smith's Training for Citizenship.

515. Political Economy

Senior Class; All Courses

Text-book: Seager's Economics, Briefer Course.

MATHEMATICS

Professor Martin
Associate Professor Shanklin
Assistant Professors Hunter, Johnstone, Bramlett

This course presupposes a thorough knowledge of arithmetic and algebra through elementary quadratics. (See requirements for admission, page 69.

520. Algebra

Freshman Class; All Courses

Review of involution, evolution, theory of indices and quadratics; simple indeterminate equations; inequalities; proportion and variation; logarithms.

Text-books: Well's Text-book in Algebra.

521. Geometry

Freshman Class; All Courses

Rectilinear figures; circles; similar figures; comparison and measurement of surfaces of polygons; regular polygons and circles. Plain and solid angles; polyhedrons; cylinders and cones; spheres, spherical polygons and pyramids; volume. Special attention is given to the formation, on the part of students, of the habit of clear and accurate reasoning and concise expression.

Text-book: Durell's Plane and Solid Geometry.

522. Trigonometry

Sophomore Class; All Courses

Measurements of angles; trigonometric functions; right triangle; general formulas; multiple angles; inverse functions; trigonometric equations; oblique triangles; trigonometric solutions of cubic equations; spherical trigonometry; general formulas; right spherical triangle; oblique spherical triangle; applications.

Text-book:Crawley's Plane and Spherical Trigonometry.

524. Higher Algebra

Sophomore Class; Courses IV, V, VI, VII

Progressions; binomial theorem; theory of limits; convergency; divergency; and summation of series; undetermined coefficients; continued fractions; determinants; theory of equations.

Text-book: Well's Text-Book in Algebra.

525. Analytic Geometry

Sophomore Class; Courses IV, V, VI, VII

Junior Class; Courses IV, V, VI, VII

Cartesian and polar systems of co-ordinates; discussion and construction of loci; the straight line; transformation of co-ordinates; circle; parabola; ellipse; hyperbola; general equation of second degree involving two variables; higher plane curves; solid analytic geometry; systems of co-ordinates; equation of the plane; the straight line in space; surfaces of the second order.

Text-book: Nichol's Analytic Geometry (Revised Ed.)

526. Differential Calculus

Junior Class; Courses IV, V, VI, VII

Differentiation of algebraic functions; trancendental functions; successive differentiation and development of functions;functions of two variables; tangents and asymptotes; envelopes.

Text-book: Snyder and Hutchinson's Differential and Integral Calculus.

527. Integral Calculus

Junior Class; Courses IV, V, VI, VII

Elementary forms of integration; rational fractions; integration of irrational fractions; successive reduction; integration of functions of two variables; lengths of curves; areas of plane curves; rectification of curves; cubature of volumes.

540-541. Bookkeeping

Courses I, II, III

The course in Bookkeeping is designed to give the students a good working knowledge of the subject. It has been introduced with a special view to enable Agricultural students to keep neat and accurate accounts of all business transactions relative to the farm.

The course seeks to familiarize the student with business methods in keeping accounts with parties, firms, banks, etc., and he is given abundant practice in making out business papers, of ordinary occurrence, and in making trial balances, balance sheets, statements.

Text Used: Sadler and Rowe's "Commercial and Industrial Bookkeeping.

MILITARY DEPARTMENT

Captain M. B. Stokes, U. S. Army, Director. Commandant of Cadets

Military Science and Tactics

Captain Stokes

The course in military instruction, as prescribed and followed, is both theoretical and practical.

In addition to the benefit which the general government derives from the military instruction given at this and other colleges, it is believed that the discipline enforced, the habits of obedience and punctuality inculcated, the improvement in bearing and appearance of those instructed, and also the practice in directing and commanding others, which nearly all in the course of time get, is of immense benefit to the student individually.

Theoretical

600. Tactics and Elements of Military Science

Junior Class; All Courses

The theoretical instruction, consisting of talks and lectures, includes the following, as prescribed by the War Department: Infantry Drill Regulations, Small Arms Firing Manual, Field Service Regulations, and Manual of Guard Duty.

601. Military Science

Senior Class; All Courses

Lectures on military history, the military system, and the military policy of the United States.

Practical

602. Military Drill

Required of all Cadets

Infantry drill, including close and extended order; advance and rear guards and outposts; marches; the ceremonies of review, inspection, parades, guard mounting, and escort of the colors; gallery practice; guard duty.

603. Target Practice

Senior Class

Complete course of instruction in rifle practice on target range.

THE SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

Station Staff

JOSEPH NELSON HARPER, B. S., M. S. A.
Director and Agriculturist

CHARLES CARTER NEWMAN, B. S
Horticulturist

HENRY WALTER BARRE, M. S.
Botanist and Plant Pathologist

ALBERT FREDERIC CONRADI, B. S. A., M. S.
Entomologist and Zoologist

THOMAS NELSON KEITT, B. S.
Chemist

ENOCH BARNETT, D. V. M.
Veterinarian and Animal Husbandman

W. A. THOMAS, B. S.
Field Pathologist

L. P. BYARS, B. S.
Assistant in Field Pathology

JOHN NATHAN HOOK
Secretary and Librarian

WILLIAM D. GARRISON, B. S.
Superintendent Coast Land Experiment Station

MISS HELEN C. BRADFORD
Stenographer

BURNS GILLISON
Foreman Experiment Station Farm

The Agricultural Experiment Station of South Carolina is a department of Clemson Agricultural College. By action of the Board of Trustees the Station work was separated from the College work in order to enable the Station investigators to give their entire time to experiments and research problems relating to the agriculture of South Carolina. The Experiment Station is supported entirely by funds provided by acts of Congress known as the Hatch and Adams Acts, and its object is, according to the law providing for its establishment, to aid in acquiring and diffusing among the people useful and practical information; to conduct scientific investigations with reference to the principles and applications of agricultural science; to rectify experiments already made; to examine into the physiology of animals and plants that remedies may be provided for the several diseases to which they are subject: to conduct such other researches relating to agricultural industry; and to make reports of progress or of results obtained, to be distributed to the farmers of the State, who may request the same.

The following divisions are operating in the Station:—Agronomy and Soils, Animal Husbandry and Veterinary Science, Zoology and Entomology, Chemistry, Horticulture, and Botany and Plant Pathology. The offices and laboratories occupy a portion of the Agricultural Hall, while the Station experimental farm, consisting of about 200 acres, is located east of and adjoining the College campus, and is equipped with the necessary buildings, including foreman's residence, barn for the proper housing of tools, live stock, etc., the horticulturist's laboratory, and the dairy barns and silos. On this farm experiments are constantly in progress covering a large range of agricultural subjects and these experiments are accessible to the inspection of the College students.

Since the Station was organized, 154 bulletins and 23 annual reports have been issued. Nothing so readily gives practical value and general importance to Experiment Station work as an extended dissemination of the reports of its progress and accomplishment in the solution of agricultural problems. The work of distributing analyses of commercial fertilizers among the farmers of this State is continued. A leaflet of four pages containing the analyses is published at the College and mailed from the office of the Station secretary once a week for twenty-two weeks in editions of 17,000 copies. These leaflets are distributed with weekly regularity upon as many farms in the State. The purpose of this wide diffusion of the records of the chemical analysis is for the protection to the farmer against the purchase of fraudulent fertilizer. The total number of bulletins issued from this Station during the past fiscal year, including the fertilizer leaflets, amounted to 404,000 copies. A striking evidence of the growing interest in all matters pertaining to the publications of this Station is in the statement of the fact that the accession of 1,600 names to the permanent mailing list was made within the past year.

Some of the characteristics of the organization and work that give special importance to the South Carolina Experiment Station as a leading and influential department of Clemson Agricultural College are: The effective support of the Board of Trustees, well equipped laboratories, a good experimental farm, a corps of specialists conducting and directing the prosecution of research work in the various divisions, and supervising a correspondence that embraces and pervades every agricultural community in the State.

ALUMNI ORGANIZATION

Clemson College Alumni Association

D. H. HENRY, '98, President.
R. E. LEE. '96, First Vice-President.
H. C. TILLMAN, '03, Second Vice-President.
B H. RAWL, '00, Third Vice-President.
H. W. BARRE, '05, Secretary,
J. E HUNTER '96, Treasurer.
D. H. HILL, '05, Alumni Orator of 1911;
D. B. PUERIFOY, '07, Alternate.

There are Alumni Chapters in each of the following cities:—

New York, N. Y.
Pittsburgh, Pa.
Washington. D. C.
Schenectady, N. Y.
Greenville, S. C.
Charleston, S. C.
Rock Hill, S. C.
Pittsfield, Mass.

Register of Graduates and Former Students

As soon as the necessary information is at hand a Register of Graduates and Former Students will be published as a separate bulletin. Graduates, former students, and friends of the institution are requested to co-operate in making this record as nearly complete as possible. The following is the information desired: name, address, year of graduation, or of attendance at the College, and occupation. This should be sent to the Secretary of the Clemson College Alumni Association.

DEGREE OF
BACHELOR OF SCIENCE WITH DIPLOMA

W. M. Albergotti	Mech. Elec.	Orangeburg
W. Allen	Agri. III	Spartanburg
F. R. Baker	Civil	Charleston
W. A. Barnette	Agri. II	York
W. D. Barnett	Text.	Oconee
P. A. Baxley	Agri. II	Barnwell
A. J. Becker	Agri. III	Spartanburg
H. F. Bethea	Agri. I	Marion
L. C. Boone	Civil	Orangeburg
B. D. Boyken	Agri. I	Kershaw
W. J. Brockington	Agri. II	Williamsburg
D. C. Britt	Mech. Elec.	Abbeville
J. M. Buckner	Agri. III	Barnwell
G. A. Burton	Civil	Newberry
N. E. Byrd	Civil	Orangeburg
J. N. Crothers	Agri. III	York
D. B. Clayton	Mech. Elec.	Fairfield
H. R. Clinkscales	Agri. III	Fairfield
L. A. Coleman	Mech. Elec.	Florence
W. C. Crum, Jr.	Civil	Orangeburg
K. Easterling	Mech. Elec.	Marlboro
S. E. Evans	Agri. II	Clarendon
G. T. Floyd	Civil	Williamsburg
T. Fulmer	Mech. Elec.	Saluda
F. B. Green	Mech. Elec.	Richland
A. Grier	Mech. Elec.	Sumter
R. P. Henderson	Agri. II	Greenwood
V. B. Higgins	Civil	Pickens
J. L. Hill, Jr.	Civil	Abbeville
F. W. Chapman	Mech. Elec.	Newberry
J. H. Earle	Civil	Pickens

NAME	COURSE	COUNTY
F. L. Gandy	Agri. I.	Darlington
J. T. Stephenson	Mech. Elec.	Oconee
W. M. Hodge	Agri. III	Clarendon
O. A. Hydrick	Civil	Orangeburg
C. F. Inman	Agri. III	Cherokee
H. S. Johnson	Agri. II	Florence
S. O. Kelley	Mech. Elec.	Americus, Ga.
L. L. LaRoche	Chem. and Geol.	Charleston
P. E. Lee	Mech. Elec.	Spartanburg
W. J. Marshall	Agri. II	Greenwood
E. C. Martin	Agri. I	Pickens
A. McDavid	Civil	Abbeville
A. A. McKeown	Agri. II	Chester
C. McLaurin	Agri. I	Sumter
C. F. Middleton	Mech. Elec.	Charleston
J. D. Murray	Text.	Colleton
R. E. Nickles	Agri. I	Abbeville
S. O. Pegues	Agri. I	Marlboro
E. H. Pinckney	Agri. I	Charleston
H. D. Plenge	Mech. Elec.	Charleston
J. S. Pyatt, Jr.	Agri. I	Georgetown
H. L. Reeves	Agri. I	Marion
J. C. Reid	Mech. Elec.	Spartanburg
J. M. Ridgill	Agri. I	Clarendon
C. M. Robbs	Civil	Cherokee
C. P. Roberts, Jr.	Civil	Greenwood
W. A. Robinson	Civil	Pickens
L. D. Rogers	Agri. III	Darlington
G. D. Ryan	Mech. Elec.	Sumter
T. R. Salley	Mech. Elec.	Orangeburg
W. E. Seabrook	Civil	Charleston
K. B. Shuler	Civil	Lexington
J. J. D. Shuler	Agri.	Lexington
M. D. Sims	Mech. Elec.	York

NAME	COURSE	COUNTY
R. M. Simpson	Agri. III	Chester
S. B. Sullivan	Mech. Elec.	Anderson
L. W. Summers	Agri. II	Orangeburg
F. G. Tarbox, Jr.	Agri. I	Georgetown
E. J. Thornhill	Agri. II	Dorchester
C. P. Townsend	Mech. Elec.	Marlboro
C. H. Trott	Civil	Charleston
H. C. Twiggs	Civil	Spartanburg
V. L. Warner	Agri. III	Greenwood
L. D. Webb	Mech. Elec.	Anderson
W. P. White	Mech. Elec.	Laurens
J. M. Wylie	Civil	York

Two Year Textile Course Certificate

G. H. Anderson	Chester
E. S. Cunningham	Laurens
J. Wingard	Lexington

STUDENTS 1910-1911

Senior Class

NAME	COURSE	COUNTY
T. L. Alford	Text.	Marion
F. H. All	Agri. II	Barnwell
s L. B. Altman	Agri. I	Horry
M. W. Arthur	Mech. Elec.	Union
D. C. Beaty	Agri. I	Union
L. D. Boone	Agri. III	Orangeburg
S. L. Britt	Agri. II	Abbeville
s G. T. Cassels	Agri. II	Fairfield
s A. D. Chapman	Agri. I	Pickens
s W. R. Connelly	Text.	Chester
H. P. Cooper	Agri. II	Fairfield
s J. T. Crawford	Text.	Laurens
E. I. Davis	Mech. Elec.	Greenwood
B. H. Deason	Agri. I	Abbeville
s J. A. Dew	Agri. I	Greenville
s O. O. Dukes	Agri. II	Dorchester
s H. C. Eagerton	Agri. I	Berkeley
s M. H. Epps	Text.	Florence
G. C. Fant	Chem. Geol.	Anderson
s J. R. Fizer	Text.	Orangeburg
s B. P. Folk	Agri. II	Newberry
s W. W. Foster	Text.	Cherokee
s R. W. Freeman	Agri. I	Darlington
s H. Fulmer	Agri. II	Saluda
G. C. Furtick	Mech. Elec.	Calhoun
G. D. Garner	Text.	Eatonton, Ga.
s W. C. Garrett	Text.	Pickens
s B. W. Gettys	Agri. II	Kershaw
C. R. Gillam	Civil	Bamberg
F. V. Gilmer	Mech. Elec.	Greenville

s—Scholarship Student

NAME	COURSE	COUNTY
J. L. Gilmore	Agri. I	Orangeburg
W. N. Ginn	Mech. Elec.	Hampton
W. S. Goodman	Civil	Oconee
s J. A. Goodwin	Agri. II	Greenville
s O. H. Graham	Agri. II	Williamsburg
W. H. Hanckel	Agri. II	Charleston
L. H. Hardin	Mech. Elec.	Cherokee
B. B. Harris	Agri. II	Anderson
J. W. Harrison	Mech. Elec.	Oconee
s L. C. Harrison	Agri. III	Oconee
s L. C. Haskell	Agri. III	Abbeville
W. M. Haynsworth	Agri. II	Florence
N. O. Head	Civil	Aiken
s W. N. Henderson	Agri. III	Newberry
s E. S. Jenkins	Agri. I	Charleston
s Jno. E. Jenkins	Agri. II	Richland
Joe. E. Jenkins	Agri. II	Berkeley
s F. H. Jeter	Agri. I	Union
s J. B. Keith	Agri. I	Florence
J. E. Kirby	Civil	Spartanburg
s B. T. Knight	Text.	Chesterfield
s J. S. Knox	Agri. I	Oconee
s G. E. Lachicotte	Agri. II	Georgetown
B. F. Lawrence	Mech. Elec.	York
J. K. Lawton	Chem. Geol.	Hampton
s L. S. Lindler	Agri. II	Lexington
s C. S. Lykes	Agri. III	Richland
s F. W. Lykes	Text.	Richland
J. M. Martin	Civil	Marion
G. L. McCord	Chem. Geol.	Abbeville
O. P. McCord	Mech. Elec.	Greenwood
F. O. McCown	Mech. Elec.	Anderson
E. A. McCreary	Text.	Aiken
L. C. McLure	Mech. Elec.	Chester

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s—Scholarship Student

NAME	COURSE	COUNTY
s W. W. Mickle	Agri. II	Kershaw
J. C. Milling	Mech. Elec.	Greenwood
F. F. Parker	Mech. Elec.	Spartanburg
s F. M. Rast, Jr.	Agri. I	Calhoun
J. E. Redden	Civil	Anderson
s J. A. Riley	Agri. I	Bamberg
F. E. Rogers	Mech. Elec.	Darlington
A. M. Salley	Agri. I	Orangeburg
O. T. Sanders	Agri. I	Sumter
F. E. Schroder	Civil	Charleston
E. N. Sitton	Text.	Anderson
R. G. Stevens	Mech. Elec.	Greenville
s J. P. Stickley	Agri. III	Beaufort
W. E. Stokes	Agri. III	Bamberg
E. L. Sumner	Chem. Geol.	Darlington
L. P. Tobin	Mech. Elec.	Barnwell
R. H. Walker	Mech. Elec.	Barnwell
s M. W. Wall	Agri. I	Marion
s W. M. Wiggins	Agri. I	Marion
T. D. Williams	Mech. Elec.	Matthews, N.C.
R. S. Wolfe	Agri. I	Orangeburg
H. M. Woodward	Civil	Spartanburg
L. T. Wyndham	Civil	Berkeley

JUNIOR CLASS

F. Adams	Agri. I	Lancaster
s H. A. Adams, Jr.	Text.	Edgefield
T. C. Adams	Text.	York
R. U. Altman	Chem. Geol.	Marion
s J. N. Ancrum	Agri. III	Kershaw
H. W. Anderson	Text.	Colleton
B. R. Bacot	Civil	Charleston
s J. A. Bates	Agri. III	Calhoun
W. S. Becker	Mech. Elec.	Spartanburg

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s—Scholarship Student

NAME	COURSE	COUNTY
T. E. Bell	Agri. II	Lee
J. W. Blackwell, Jr.	Mech. Elec.	Darlington
E. E. Blount	Agri. I	Barnwell
A. J. Brown	Mech. Elec.	Pickens
G. W. Byars	Agri. I	Cherokee
W. M. Byrd	Mech. Elec.	Darlington
Jno. C. Caldwell	Civil	Spartanburg
s R. D. Caldwell	Agri. III	Cherokee
S. M. Connor	Agri. I	Colleton
s M. L. Cooper	Agri. I	Fairfield
s H. S. Covington	Agri. II	Marlboro
J. R. Crawford	Civil	Laurens
L. S. David	Civil	Greenville
J. B. Davis	Civil	Pickens
J. C. DeWitt	Agri.	Darlington
J. M. Dreher	Chem. Geol.	Lexington
A. B. Evans	Mech. Elec.	Charleston
s T. S. Evans, Jr.	Agri. I	Chesterfield
s J. F. Ezell	Agri. I	Spartanburg
s W. D. Ezell	Agri. III	Spartanburg
s A. P. Fant	Agri. I	Anderson
s C. B. Faris	Agri. I	York
O. B. Brodie	Civil	Oconee
J. H. Bull	Civil	Sumter
s C. S. Folk	Agri. I	Bamberg
s J. B. Free	Agri. III	Union
s H. A. Freeman	Agri. III	Laurens
J. H. Gage	Mech. Elec.	Union
s R. W. Galphin	Agri. I	Orangeburg
s L. C. Gilstrap	Agri. II	Pickens
s A. K. Goldfinch	Text.	Horry
s W. R. Gray	Agri. I	Laurens
s C. M. Hall	Agri. I	Anderson
s E. E. Hall	Agri. I	Lancaster

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s—Scholarship Student

NAME	COURSE	COUNTY
R. R. Hall	Mech. Elec.	Chester
M. L. Hamer	Agri. I	Marlboro
E. E. Hamlin	Civil	Anderson
s D. T. Hardin	Agri. I	Abbeville
s G. L. Hardy	Text.	Edgefield
J. G. Harris	Agri. II	Laurens
J. E. Hartley	Mech. Elec.	Lexington
s H. W. Harvey	Agri. I	Berkeley
s C. J. Hayden	Agri. III	Orangeburg
s J. H. Hayden	Agri. II	Orangeburg
s W. H. Hayes	Agri. I	Spartanburg
M. S. Haynsworth	Mech. Elec.	Darlington
s G. J. Hearsey	Agri. III	Marlboro
D. B. Hill	Mech. Elec.	Bamberg
s H. M. Hutson	Agri. III	Aiken
O. Jacobs	Agri. III	Newberry
H. C. Jennings	Agri. I	Orangeburg
s R. M. Jeter	Agri. III	Richland
W. F. Johnson	Mech. Elec.	Bamberg
E. P. Josey	Agri. II	Darlington
H. O. Kaigler	Civil	Calhoun
H. S. Kennerly	Agri. I	Greenwood
W. R. LaMotte	Mech. Elec.	Darlington
s D. L. Latimer	Text.	Abbeville
s J. G. Lawton	Agri. III	Hampton
s J. T. Lazar	Agri. I	Barnwell
J. R. W. Lindler	Civil	Lexington
E. G. Littlejohn	Mech. Elec.	Union
J. H. Mappus	Agri. II	Charleston
E. D. Mays	Agri. I	Greenwood
s O. F. McCrary	Agri. I	Greenville
D. McIntyre	Mech. Elec.	Marion
R. J. McIntosh	Mech. Elec.	Richland

s—Scholarship Student

NAME	COURSE	COUNTY
S. A. Miller	Text.	Lexington
J. E. M. Mitchell	Mech. Elec.	Charleston
W. W. Newman	Mech. Elec.	Chesterfield
B. F. Owens	Agri. II	Barnwell
T. M. Parker	Mech. Elec.	York
s B. F. Pennell	Agri. III	Abbeville
W. G. Perry	Civil	Greenville
s T. Perry	Text.	Greenville
W. C. Petrie	Mech. Elec.	Spartanburg
W. H. Privette	Agri. II	Darlington
s H. T. Prosser	Agri. I	Williamsburg
T. C. Redfern	Agri. II	Anderson
s T. R. Reid	Agri. III	Greenville
W. H. Rentz	Civil	Hampton
s F. W. Risher	Agri. I	Colleton
s T. R. Risher, Jr.	Agri. III	Colleton
H. F. Rivers, Jr.	Mech. Elec.	Charleston
F. L. Ross	Agri. II	Cherokee
s N. K. Rowell	Agri. I	Marion
J. A. Simpson	Mech. Elec.	Anderson
s A. G. Small	Agri. I	Horry
E. A. Sompayrac	Mech. Elec.	Darlington
s C. H. Stanton	Agri. III	Marlboro
J. N. Stribling	Civil	Oconee
E. W. Tison	Mech. Elec.	Hampton
s D. Tompkins	Text.	York
B. J. Truesdale	Mech. Elec	Kershaw
s R. F. Ulmer	Agri. III	Hampton
J. B. Wakefield	Text.	Abbeville
s J. H. S. Wessinger	Agri. II	Lexington
s J. M. Workman	Text.	Sumter
s L. F. Yates	Text.	Darlington
s G. H. Zerbst	Agri. III	Charleston

s—Scholarship Student

SOPHOMORE CLASS

NAME	COURSE	COUNTY
R. A. Alexander	Agri.	Chester
G. M. Anderson	Agri.	Abbeville
J. P. Anderson	Eng.	Abbeville
L. K. Anderson	Eng.	Spartanburg
s D. H. Arthur	Text.	Union
s I. D. Auld	Agri.	Charleston
J. A. Aull	Agri.	Anderson
W. D. Banks	Agri.	Calhoun
J. W. Barnwell, Jr.	Eng.	Charleston
G. D. Barr	Eng.	Greenville
J. A. Barre	Agri.	Lexington
A. H. Barrington	Agri.	Marlboro
W. O. Benson	Eng.	Spartanburg
M. D. Berry	Eng.	Greenville
J. E. Beard	Eng.	Anderson
P. S. Bethea	Agri.	Dillon
I. L. Bigham	Eng.	Chester
L. R. Blackmon	Eng.	Lancaster
J. K. Boggs	Eng.	Pickens
H. J. Bomar	Eng.	Spartanburg
s F. W. Bouson	Agri.	Charleston
W. E. Bowers	Agri.	Kershaw
s H. G. Boylston	Agri.	Barnwell
W. B. Britt	Eng.	Abbeville
s J. E. Brodie	Agri.	Aiken
S. K. Brown	Eng.	Florence
W. D. Bryant	Eng.	Orangeburg
E. M. Byrd	Eng.	Darlington
s D. L. Cannon	Agri.	Spartanburg
s P. M. Carpenter	Agri.	Greenville
J. L. Carson, Jr.	Eng.	Spartanburg
J. T. Cochran	Eng.	Pickens

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s —Scholarship Student

	NAME	COURSE	COUNTY
	H. H. Collier	Eng.	Charleston
	M. Coles	Agri.	Jacksonville, Fla.
	J. E. Cottingham	Agri.	Dillon
	A. Covar	Eng.	Edgefield
s	D. H. Covington	Agri.	Marlboro
	B. A. Cromer	Agri.	Anderson
s	J. C. Culler	Agri.	Orangeburg
	W. H. Daniel	Eng.	Richland
	R. F. Davis	Eng.	Greenwood
s	T. F. Davis	Agri.	Richland
	C. K. Dunlap	Eng.	Anderson
s	L. R. Elliott	Text.	Lancaster
	James Epps, Jr.	Eng.	Williamsburg
	J. O. Erwin, Jr.	Eng.	Spartanburg
s	A. J. Evans, Jr.	Text.	Dillon
	R. W. Fant	Agri.	Anderson
s	C. G. Faris	Agri.	York
s	C. L. Faris	Agri.	York
s	W. H. Frampton	Agri.	Charleston
s	G. E. Frick	Text.	Lexington
	A. P. Gandy	Eng.	Darlington
	H. L. Gandy	Agri.	Darlington
	T. C. Gentry	Eng.	Clarendon
	W. C. Gilmore	Eng.	Union
	H. A. Hagood	Eng.	Spartanburg
	A. B. Haight	Eng.	Charleston
	G. W. Hairston	Eng.	Newberry
	J. D. Hall	Eng.	Pickens
s	J. E. Hannahan	Text.	Charleston
	E. Hanvey	Agri.	Abbeville
	S. E. Harrison	Eng.	Greenville
	M. Heldman	Eng.	Spartanburg
	H. A. Heriot	Eng.	Lee
s	J. L. Hiers	Agri.	Hampton

s—Scholarship Student

NAME	COURSE	COUNTY
s J. R. Hill	Agri.	Darlington
J. C. FitzSimons	Eng.	Charleston
G. W. Fleming	Eng.	Florence
P. S. Hale	Agri.	Charleston
s W. W. Herbert	Agri.	Newberry
s F. Hodges	Agri.	Greenwood
s L. D. Hutson	Agri.	Aiken
A. H. Jackson	Eng.	Abbeville
A. C. Jenkins	Agri.	Oconee
J. W. Johnson	Eng.	Florence
B. M. Jones	Eng.	Newberry
I. B. Jones, Jr.	Eng.	Lancaster
J. H. Kangeter	Eng.	Charleston
s C. J. King	Agri.	Lancaster
s W. T. Kyzer	Agri.	Lexington
A. H. Lachicotte	Eng.	Georgetown
W. F. Lachicotte	Eng.	Georgetown
M. A. Laney	Agri.	Chesterfield
B. T. Lanham	Eng.	Edgefield
M. S. Lawton	Eng.	Barnwell
s F. H. Lathrop	Agri.	Orangeburg
H. O. Lindler	Eng.	Lexington
J. R. Lomax	Agri.	Abbeville
s W. H. Martin	Agri.	York
L. H. Massey	Eng.	York
T. F. Massey	Eng.	York
T. D. McAlhany	Eng.	Dorchester
J. W. McClure, Jr.	Eng.	Union
H. S. McGee	Eng.	Anderson
J. A. McGill	Agri.	Abbeville
E. B McLaurin	Agri.	Marlboro
s W. G. McLeod	Agri.	Lee
s F. M. Mellette	Agri.	Sumter
J. A. Merritte	Eng.	Edgefield

s—Scholarship Student

	NAME	COURSE	COUNTY
	G. A. Middleton	Text.	Charleston
	H. G. Miley	Agri.	Hampton
	W. E. Morrison	Eng.	Chester
s	P. E. Myers	Agri.	Berkeley
s	H. F. Padgett	Agri.	Saluda
	A. D. Park	Eng.	Fairfield
s	C. S. Patrick	Agri.	Cherokee
	G. H. Pearce	Agri.	Edgefield
	J. F. Pearson	Eng.	Orangeburg
s	F. B. Pennell	Agri.	Anderson
s	R. E. Pennel	Text.	Anderson
s	J. W. Perrin	Agri.	Lee
	E. T. Provost	Eng.	York, Neb.
	S. W. Rabb	Eng.	Greenville
	W. E. Redden	Eng.	Anderson
s	J. C. Rich	Agri.	Colleton
	F. H. Robertson	Eng.	Charleston
	R. Robison	Text.	Greenville
	H. G. Rogers	Agri.	Marlboro
	R. C. Rowell	Eng.	Bamberg
s	W. A. Rowell	Agri.	Marion
	J. Y. Scruggs	Eng.	York
s	J. L. Seal	Agri.	Greenwood
s	W. O. Seigler	Text.	Greenwood
	D. M. Sloan	Eng.	Greenville
	W. L. Smarr	Agri.	York
	L. F. Sollee	Eng.	Lexington
	J. R. Sprott	Eng.	Clarendon
	E. P. Steele	Agri.	York
s	T. E. Rector	Agri.	Spartanburg
	W. H. Rochester	Eng.	Greenville
	M. F. Sanders	Eng.	Greenwood
	J. G. Smith	Eng.	Barnwell
	Y. H. Sponcler	Eng.	Newnam, Ga.

s—Scholarship Student

	NAME	COURSE	COUNTY
	C. E. Stokes	Agri.	Laurens
	C. E. Stoudemire	Eng.	Lexington
s	J. L. Thomas	Agri.	Chester
	J. N. Todd	Eng.	Oconee
s	A. C. Turbeville	Agri.	Williamsburg
s	S. Y. Tupper	Agri.	Charleston
	R. B. Vance	Eng.	Laurens
	R. B. Water	Text.	York
	R. N. Watkins	Agri.	Anderson
s	J. N. Webb	Agri.	Anderson
s	T. W. Weeks	Text.	Aiken
	B. A. Weinberg	Agri.	Sumter
	J. M. Wilson	Eng.	Lee
s	M. A. Wilson	Agri.	Laurens
	T. B. Wilson	Eng.	Aiken
s	J. T. Witherspoon	Agri.	Clarendon
	L. F. Wolfe	Eng.	Orangeburg
s	B. F. Yeargin	Agri.	Laurens
s	C. P. Youmans	Agri.	Barnwell

FRESHMAN CLASS

	F. K. Altman	Agri.	Marion
s	L. C. Altman	Agri.	Barnwell
	J. W. Anderson	Eng.	Anderson
	L. N. Anderson	Eng.	Chester
s	G. M. Armstrong	Agri.	Barnwell
	R. J. Aycock	Agri.	Clarendon
	C. W. Baker	Agri.	Marion
	D. K. Banks	Eng.	Calhoun
	J. C. Barksdale	Agri.	Laurens
	B. P. Barron	Eng.	York
	F. H. Barnwell	Eng.	Colleton
	W. N. Beaty	Agri.	Union

---

s—Scholarship Student

NAME	COURSE	COUNTY
J. A. Berley	Agri.	Newberry
C. E. Berry	Eng.	Sabot, Va.
R. Berry	Agri.	Dillon
Homer Bethea	Agri.	Dillon
B. J. Blume	Agri.	Orangeburg
s M. B. Boulware	Agri.	Fairfield
s S. P. Bowles	Agri.	Newberry
W. L. Bowman	Eng.	Abbeville
A. R. Boyd	Agri.	Abbeville
W. F. Brawley	Eng.	Chester
P. L. Breeden	Eng.	Marlboro
J. W. Britt	Eng.	Abbeville
B. W. Brown	Eng.	Cherokee
G. H. Brown	Eng.	York
J. Brown	Agri.	Charleston
C. A. Bruce	Agri.	Oconee
s E. P. Bruce	Agri.	Oconee
V. F. Bryant	Eng.	Orangeburg
E. D. Buckley	Eng.	Charleston
X. O. Bunch	Eng.	Orangeburg
F. M. Cain	Agri.	Sumter
R. A. Calhoun	Eng.	Greenwood
s G. E. Campsen	Agri.	Charleston
s Ellison Capers	Agri.	Clarendon
W. W. Carpenter	Eng.	Spartanburg
H. G. Carson	Agri.	Orangeburg
T. M. Cathcart	Agri.	Fairfield
K. G. Caughman	Eng.	Richland
W. W. Caughman	Agri.	Lexington
s R. G. Causey	Agri.	Berkeley
H. E. Chambliss	Eng.	Hardinsburg, Ky.
H. L. Chaplin	Agri.	Orangeburg
J. R. Clark	Agri.	Lexington
W. L. Clarke	Eng.	Berkeley

---

s—Scholarship Student

NAME	COURSE	COUNTY
R. D. Cothran	Eng.	Greenville
A. B. Covar	Eng.	Edgefield
P. M. Covington	Agri.	Marlboro
R. E. Cox	Agri.	Abbeville
F. P. Crawford	Eng.	Saluda
W. D. Crawford	Agri.	Union
L. F. Crenshaw	Eng.	Pickens
H. M. Crum	Eng.	Bamberg
F. C. Dantzler	Agri.	Orangeburg
M. A. Dantzler	Eng.	Calhoun
J. T. Darby	Eng.	Richland
W. R. Davis	Eng.	Oconee
C. E. DesChamps	Eng.	Sumter
M. M. DeWitt	Agri.	Darlington
Mark Dickson	Eng.	Oconee
s J. E. Dunlap	Agri.	Darlington
J. B. Douthit	Eng.	Anderson
P. M. Dwight	Eng.	Sumter
A. L. Edwins	Eng.	Orangeburg
G. W. Eleazer	Eng.	Lexington
J. M. Eleazer	Agri.	Lexington
C. R. Emerson	Eng.	Greenwood
W. C. Epps	Eng.	York
R. E. Ernst	Eng.	Greenville
J. W. Erwin	Eng.	Spartanburg
R. B. Ezell	Agri.	Spartanburg
W. C. Farmer	Agri.	Barnwell
L. W. Felder	Eng.	Clarendon
s L. L. Ferebee	Agri.	Beaufort
B. G. Field	Agri.	Pickens
J. E. Fletcher	Eng.	Marlboro
s J. C. Foster	Agri.	Spartanburg
L. R. Free	Agri.	Barnwell
M. W. Funk	Eng.	Williamsburg

s—Scholarship Student

NAME	COURSE	COUNTY
S. A. Gandy	Agri.	Darlington
E. B. Gary	Eng.	Abbeville
E. R. Gilmore	Agri.	Union
J. H. Gilreath	Eng.	Spartanburg
E. Glover	Eng.	Orangeburg
N. E. Graham	Eng.	Greenwood
F. Grant	Agri.	Abbeville
S. L. Greene	Agri.	Barnwell
T. C. Haddon	Agri.	Greenwood
E. W. Haile	Eng.	Kershaw
R. M. Halliburton	Agri.	Lewis, Ky.
F. L. Hardin	Agri.	Chester
R. H. Harleston	Agri.	Charleston
G. D. Harris	Agri.	Cherokee
T. G. Harris	Agri.	Laurens
J. F. Harrison	Agri.	Spartanburg
G. E. Hightower	Agri.	Bamberg
E. D. Hodge	Agri.	Clarendon
J. L. Holcomb	Agri.	Spartanburg
J. H. Hollingsworth	Eng.	Edgefield
C. E. Holroyd	Eng.	Greenville
R. S. Hood	Eng.	Sumter
I. B. Hughes	Eng.	York
M. W. Hunter	Eng.	Pickens
F. B. Hutto	Agri.	Bamberg
D. E. Hydrick	Eng.	Spartanburg
s B. G. Hyrne	Text.	Colleton
s B. M. Jackson	Agri.	Sumter
R. Jackson	Eng.	Spartanburg
B. M. James	Eng.	Greenville
R. F. Jenkins	Agri.	Richland
F. J. Jervey	Eng.	Charleston
F. P. Johnson	Eng.	Greenwood
J. B. Johnson	Eng.	Saluda
s F. S. Johnston	Agri.	Florence

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s—Scholarship Student

NAME	COURSE	COUNTY
s C. R. Jones	Agri.	Colleton
W. H. Kelley	Eng.	Oconee
R. G. Kennedy	Eng.	Orangeburg
P. R. Kilgo	Eng.	Florence
C. H. Kimbrell	Eng.	York
L. H. Koger	Agri.	Colleton
A. S. Lachicotte	Eng.	Georgetown
T. E. LaGrone	Agri.	Saluda
J. G. Leland	Eng.	Charleston
B. R. Lever	Eng.	Lexington
A. P. Lewis	Agri.	Oconee
F. M. Lindfors	Agri.	Waynesville, N.C.
S. M. Major	Eng.	Anderson
S. P. Marshall	Eng.	Greenwood
R. F. Martin	Eng.	Anderson
B. O. Mauldin	Eng.	Greenville
W. D. Mayfield	Agri.	Bamberg
R. W. Maynard	Eng.	Anderson
s J. N. McBride	Agri.	Florence
F. H. McDonald	Eng.	Charleston
J. W. McDonald	Eng.	Edgefield
R. E. McElveen, Jr.	Eng.	Lee
J. M. McIntosh	Agri.	Richland
W. C. McIver	Agri.	Darlington
D. L. McLure	Agri.	Lee
s G. F. McMillan	Text.	Bamberg
C. S. Merritte	Eng.	York
L. I. Metts	Eng.	Bamberg
J. E. Miley	Agri.	Hampton
C. F. Mitchell	Eng.	Laurens
W. E. Mitchell	Eng.	Marlboro
D. P. Moore	Eng.	Sumter
S. P. Morrah	Agri.	Abbeville
H. C. Moses	Eng.	Sumter

---

s—Scholarship Student

NAME	COURSE	COUNTY
C .E. Neese	Agri.	Orangeburg
W. R. Nelson	Eng.	Kershaw
H. J. Nettles	Agri.	Darlington
C. A. Newnham	Eng.	Richland
H. H. Nickels	Eng.	Greenwood
J. E. Norris	Agri.	Orangeburg
J. G. O tzel	Eng.	Union
s W. W. Padgett	Agri.	Saluda
s H. L. Parker	Agri.	Spartanburg
L. C. Pearlstine	Eng.	Calhoun
J. W. Peeples	Eng.	Colleton
P. P. Peeples	Eng.	Hampton
E. E. Poag	Eng.	York
H. B. Ponds	Agri.	Colleton
s E. H. Pressley	Agri.	Chester
s W. A. Reeves	Agri.	Fairfield
Z. C. Reeves	Eng.	Colleton
C. A. Rice	Eng.	Richland
W. H. Rice	Agri.	Bamberg
G. C. Richey	Eng.	Laurens
s R. H. Ridgill	Agri.	Clarendon
W. J. Rivers	Eng.	Richland
J. L. Rochester	Eng.	Greenville
A. F. Rodgers	Eng.	Williamsburg
C. B. Rogers	Eng.	Darlington
s T. B. Rogers	Text.	Williamsburg
s F. P. Salter	Agri.	Edgefield
A. F. Sanders	Eng.	Spartanburg
I. L. Sanders	Agri.	Sumter
A. E. Schilletter	Agri.	Oconee
W. A. Schilletter	Agri.	Oconee
J. N. Schroder	Agri.	Charleston
W. N. Scoville	Eng.	Orangeburg
E. H. Segars	Eng.	Darlington

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s—Scholarship Student

NAME	COURSE	COUNTY
M. F. Sessions	Agri.	Charleston
G. J. Sheppard	Eng.	Abbeville
R. L. Sherwood	Eng.	Dillon
G. C. Shirley	Agri.	Anderson
R. C. Shiver	Agri.	Oconee
C. A. Simmons	Eng.	Laurens
J. W. Simmons	Eng.	Laurens
J. W. Sims	Agri.	York
C. O. Smith	Agri.	Spartanburg
s G. W. Smith	Agri.	Anderson
H. L. Smith	Eng.	Anderson
J. D. Smith	Eng.	Union
Jas. M. Smith	Eng.	Newberry
Joe M. Smith	Eng.	Anderson
J. R. Smith	Eng.	Barnwell
M. R. Smith	Eng.	Anderson
W. W. Smith	Agri.	Pickens
J. M. Spears	Eng.	Union
s W. T. P. Sprott	Agri.	Clarendon
A. G. Stanford	Eng.	Charleston
L. H. Stello	Eng.	Charleston
H. R. Stender	Agri.	Charleston
S. J. Sturgeon	Eng.	Williamsburg
M. N. Sturkey	Eng.	Edgefield
W. A. Taylor	Eng.	Dadeville, Ala.
H. M. Thomas	Agri.	Clarendon
J. L. Thomas	Agri.	Chester
W. P. Thomas	Eng.	Spartanburg
s J. M. Thompson	Agri.	Chesterfield
C. C. Thornton	Eng.	Laurens
T. W. Thornhill	Eng.	Dorchester
D. D. Tinsley	Eng.	Spartanburg
J. R. Todd	Eng.	Abbeville
C. I. Truluck	Agri.	Sumter

---

s—Scholarship Student

NAME	COURSE	COUNTY
C. A. Turner	Agri.	Grover, N.C.
A. B. Usher	Agri.	Marlboro
F. O. Varn	Eng.	Orangeburg
J. D. Varn	Eng.	Orangeburg
J. D. Verner, Jr.	Eng.	Oconee
W. C. Wadsworth	Agri.	Darlington
s J. M. Walker	Agri.	Charleston
G. W. Wannamaker	Agri.	Calhoun
L. B. Wannamaker	Agri.	Calhoun
A. H. Ward	Agri.	Florence
A. R. Ward	Eng.	Georgetown
J. Ward	Eng.	Georgetown
C. W. Watkins	Agri.	Edgefield
J. H. S. Wells	Agri.	Spartanburg
C. T. Weston	Agri.	Richland
D. L. White	Eng.	Chesterfield
F. W. Whitten	Eng.	Oconee
C. O. Williams	Eng.	Union
F. M. Williams	Eng.	Greenville
L. E. Williams	Eng.	Charleston
J. W. Willis	Agri.	Saluda
R. H. Wingo	Eng.	Spartanburg
s J. T. Woodward	Agri.	Aiken
W. D. Wood	Agri.	Greenville
s V. B. Wright	Agri.	Chester
J. T. Zeigler	Agri.	Orangeburg

Preparatory Class

NAME	COUNTY
B. B. Axon	Orangeburg
F. H. Bailey	Spartanburg
E. S. Blanchard	Charleston
L. R. Bodie	Lexington

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s—Scholarship Student

NAME	COUNTY
W. M. Bomar	Spartanburg
P. R. Brown	Oconee
T. B. Burdette	Laurens
R. C. Chapman	Greenville
*W. Chavis	Marlboro
J. M. Cothran	Greenville
H. B. Derrick	Saluda
O. M. Doyle	Pickens
S. M. Earle	Brevard, N. C.
L. T. Emanuel	Sumter
D. M. Evans	Clarendon
C. J. Felder	Orangeburg
T. C. Felder	Orangeburg
B. C. Fitch	Williamsburg
G. D. Foxworth	Marion
E. R. Furtick	Calhoun
J. A. Gandy	Darlington
J. R. Golson	Calhoun
E. B. Greene	Florence
M. A. Hagood	Fairfield
H. V. Hale	Charleston
G. B. Hammond	Aiken
T. B. Hardin	Chester
M. Hendricks	Pickens
G. P. Hoffman	Fairfield
B. O. Hook	Lexington
A. J. Howle	Darlington
E. L. Hubster	Colleton
M. C. Hunter	Anderson
S. E. Jeffords	Florence
J. E. Jones	Kershaw
L. B. Jones	Kershaw
W. S. Jones	Lexington
J. E. Kaminer	Lexington

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*Died Feb. 12, 1911.

NAME	COUNTY
I. F. Kelley	Florence
T. B. Kelley	Oconee
D. M. Kennedy	Abbeville
S. E. Kimbrell	York
E. G. Kittles	Hampton
W. B. Laurence	Pickens
G. W. LeMaster	Cherokee
S. L. Lindler	Lexington
R. E. Lumpkin	Fairfield
S. K. Martin	Anderson
C. W. Masters	Anderson
W. O. Merck	Pickens
C. Mims	Clarendon
J. T. Mims	Edgefield
J. W. Mims	Clarendon
A. L. Moore	Spartanburg
R. W. Moore	Sumter
S. L. Newman	Oconee
T. R. Norris	Spartanburg
F. L. Oates	York
J. K. Pegues	McFarlan, N. C.
E. S. Pinckney	Charleston
F. L. Richardson	Williamsburg
O. J. Richardson	Marion
S. L. Roberts	Dillon
S. R. Roberts	Marion
F. B. Rogers	Marlboro
R. A. Rogers	Marion
J. A. Singley	Newberry
J. C. Smith	Saluda
M. A. Smith	Clarendon
G. B. Taylor	Lexington
G. I. Thomson	Spartanburg
L. M. Tolbert	Greenwood
J. W. Truluck	Sumter

NAME	COUNTY
W. M. Turbeville	Clarendon
C. W. Ward	Florence
E. H. Wilkins	Cherokee
B. N. Williams	Greenwood
H. E. Williams	East Nashville, Tenn.
W. G. Williams	York
J. K. Witherspoon	Anderson

Six Weeks Course in Agriculture

J. H. Barnett	Oconee
W. L. Bedenbough	Newberry
Clarence Bishop	Union
Ballard Brezeal	Oconee
C .C. Cely	Anderson
J. T. Claffy	Calhoun
H. N. Darby	Calhoun
W. A. Dickson	Oconee
J. P. Fellers	Newberry
J. M. Kuemmerer	Oconee
D. M. Lever	Richland
L. G. Lever	Richland
A. W. Lowry	Chester
C. L. McManus	Lancaster
J. W. Merchant	Saluda
J. A. Robinson	Pickens
W. L. Wier	Laurens
T. M. Wolfe	Orangeburg
J. W. Whitworth	Richland

Special Students

D. D. Barr	Lexington
D. Boggs	Anderson
K. Nims	York

Two-Year Textile Course

G. A. Hamrick	Richland

NAME	COUNTY
Irregular Students	
s H. C. Beaty	Georgetown
A. S. Beddell	Greenville
P. L. Bissell	Charleston
F. Black	Pelham, N. Y.
H. S. Davis	Charleston
A. T. Haynsworth	Sumter
W. F. B. Haynsworth	Sumter
W. H. Williford	Sumter

SUMMARY

CLASS	AGRICULTURAL COURSES				ENGINEERING COURSES					TOTALS
	AGRICULTURE	AGRI. & CHEM.	AGRI. & ANI. IND.	TOTAL	MECH. & ELEC.	CIVIL	TEXTILE	CHEM. & GEOL.	TOTAL	
SENIOR	19	7	18	44	18	9	12	4	43	87
JUNIOR	28	18	12	58	24	13	12	2	51	109
SOPHOMORE				70					83	153
FRESHMAN				113					130	243
SPECIAL				3						3
IRREGULAR				1	2	1	2	2	7	8
SHORT COURSE				19			1		1	20
PREPARATORY										80
TOTALS	47	25	30	308	44	23	27	8	315	703

By Counties in South Carolina

Abbeville	25
Aiken	9
Anderson	37
Bamberg	14
Barnwell	17
Beaufort	2
Berkeley	7
Calhoun	14
Charleston	42
Cherokee	10
Chester	15
Chesterfield	6
Clarendon	15
Colleton	13
Darlington	26
Dillon	7
Dorchester	3
Edgefield	13
Fairfield	10
Florence	14
Georgetown	7
Greenville	28
Greenwood	19
Hampton	11
Horry	3
Kershaw	9
Lancaster	7
Laurens	18
Lee	7
Lexington	24
Marion	14
Marlboro	15
Newberry	12
Oconee	26
Orangeburg	33

Pickens	17
Richland	19
Saluda	10
Spartanburg	38
Sumter	20
Union	17
Williamsburg	10
York	26
Total South Carolina	688

By States

South Carolina	688
North Carolina	5
Kentucky	2
Georgia	2
New York	1
Nebraska	1
Virginia	1
Tennessee	1
Alabama	1
Florida	1
Total	703

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CATALOG

—OF—

The Clemson Agricultural College

Of South Carolina

State Agricultural and Mechanical College

TELEGRAPH AND POST OFFICES: CLEMSON COLLEGE
EXPRESS AND FREIGHT OFFICES: CALHOUN

RECORD OF NINETEENTH YEAR

1911-1912

—AND—

Announcements For 1912-1913

Clemson Colllege Print 1912

1912

JULY

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SEPTEMBER

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NOVEMBER

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AUGUST

..	..	..	..	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

OCTOBER

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27	28	29	30	31	..	..

DECEMBER

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1913

JANUARY

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12	13	14	15	16	17	18
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MARCH

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30	31	..	..	..	..	..

MAY

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FEBRUARY

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APRIL

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27	28	29	30	31	..	..

JUNE

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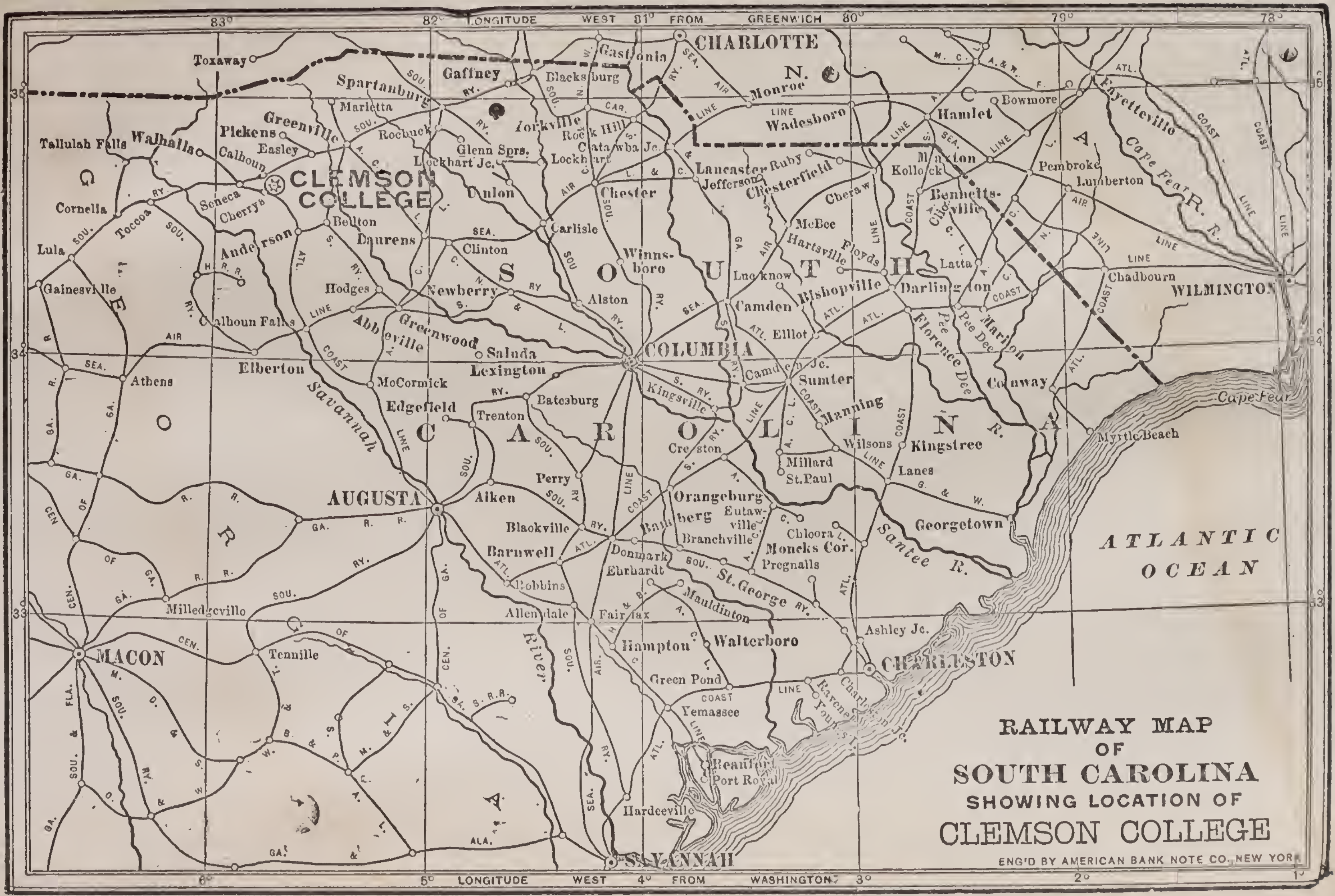
29	30	..	..	..	..	..



RAILWAY MAP
OF
SOUTH CAROLINA
SHOWING LOCATION OF
CLEMSON COLLEGE

ENG'D BY AMERICAN BANK NOTE CO. NEW YORK

COLLEGE CALENDAR
Session 1912-1913

1912	First Term
Sept. 11	Opening of the 20th session; exercises begin at 8:30 A. M.
Sept. 12	Examinations for admission and removal of conditions.
Sept. 13	Examinations for admission and removal of conditions.
Sept. 14	Examinations for admission and removal of conditions.
Sept. 16	Class work begins for the First Term.
Oct. 25	First "Month" of the first term ends.
Nov. 28	Thanksgiving: a holiday.
Dec. 13	Second "Month" of the first term ends.
Dec. 14	Examinations for the first term begin.
Dec. 21	First day of the Christmas Holidays.

1913	Second Term
Jan. 3	The Second Term begins at 8:30 A. M.
Jan. 18	Annual Public exercises of the Columbian Literary Society.
Jan. 19	Lee's Birthday.
Feb. 7	First "Month" of the second term ends.
Feb. 22	Washington's Birthday: a holiday. Annual public exercises of the Palmetto Literary Society.
Feb. 25	Stated meeting of the Board of Trustees.
Mar. 14	Second "Month" of the second term ends.
Mar. 15	Examinations for the second term begin.
Mar. 18	Calhoun's Birthday: a holiday.
Mar. 22	Annual Public exercises of the Calhoun Literary Society.

1913	Third Term
Mar. 24	The Third Term begins at 8:30 A. M.
April 25	First "Month" of the Third Term ends.
May 24	Examinations for the Senior Class begin.
May 30	Second "Month" of the third term ends.
May 31	Examinations for the third term begin.
June 8	Beginning of the Commencement Exercises; Baccalaureate Sermon.
June 9	Contest of Literary Society representatives. Military exercises. Address of Alumni orator.
June 10	Commencement day. Address to the Graduating Class. Graduating exercises. Delivery of diplomas.
July 8	Stated meeting of the Board of Trustees.

Grades and Reports

Reports of class standing and discipline are sent to the parents at intervals of approximately one and one-half months throughout the session. During 1912-1913 these reports will be made up for periods ending on the following dates, and will usually be mailed to parents about one week later. OCTOBER 25, DECEMBER 13, and DECEMBER 20,* 1912; FEBRUARY 7 and MARCH 21,* 1913; APRIL 25 and JUNE 6,* 1913.

Dates marked with an asterisk are approximate, depending upon the time that the term examinations end. The grades sent out on these three dates are a combination of the examination grade with the average grade of the two months.

Quarterly Dues
(See Fees and Expenses)

These dues are payable Sept. 11, November 13, 1912; January 22 and April 2 1913. **Prompt payments are required of all.**

BOARD OF TRUSTEES

Life Members

HON. ALAN JOHNSTONE, President	Newberry, Newberry Co.
HON. R. W. SIMPSON	Pendleton, Anderson Co.
SENATOR B. R. TILLMAN	Trenton, Edgefield Co.
HON. M. L. DONALDSON	Greenville, Greenville Co.
HON. J. E. WANNAMAKER	St. Matthews, Calhoun Co.
HON. W. W. BRADLEY	Abbeville, Abbeville Co.
HON. R. I. MANNING	Sumter, Sumter Co.

Term Expires 1914

HON. W. D. EVANS	Cheraw, Chesterfield Co.
HON. B. H. RAWL	Lexington, Lexington Co.
HON. IVY M. MAULDIN	Pickens, Pickens Co.

Term Expires 1916

HON. E. T. HUGHES	Marion, Marion Co.
DR. R. H. TIMMERMAN	Batesburg, Lexington Co.
HON. S. T. McKEOWN	Cornwell, Chester Co.

STANDING COMMITTEES OF THE BOARD*

Executive Committee

Messrs. Donaldson, Bradley, McKeown, Mauldin, Hughes

Finance Committee

Messrs. Simpson, Donaldson, Mauldin, Bradley, Manning

Agricultural Committee

Messrs. Tillman, Wannamaker, Manning, Evans, Rawl

Fertilizer Committee

Messrs. Evans, Manning, McKeown

Entomological Committee

(State Crop Pest Commission)

Messrs. Evans, Timmerman, Hughes

Veterinary Committee

Messrs. Evans, Timmerman, Hughes

Scholarship Committee

Messrs. Bradley, Evans, Hughes

---

*The President of the Board, Hon. Alan Johnstone, is ex officio a member of all committees.

Board of Visitors for the Sessions 1911-1912 and 1912-1913
Meeting First Wednesday in May

First District.—Hon. J. Elmore Martin, Charleston, S. C.
Second District.—Hon. Wm. T. Walton, Johnston, S. C.
Third District.—Hon. J. J. Ballenger, Seneca, S. C.
Fourth District.—Hon. Thos. F. Parker, Greenville, S. C.
Fifth District.—Hon. G. K. Laney, Chesterfield, S. C.
Sixth District.—Hon. D. R. Coker, Hartsville, S. C.
Seventh District.—Hon. R. O. Purdy, Sumter, S. C.

ADMINISTRATIVE OFFICERS AND EMPLOYEES

WALTER MERRITT RIGGS, B. S., E. M. E., LL. D.
President

PAUL HAMILTON EARLE SLOAN, M. D.
Treasurer and Secretary Board of Trustees

ALEXANDER MAY REDFERN, B. S., M. D.
Surgeon

MARCUS BUTLER STOKES
Captain 10th Infantry, U. S. Army
Commandant

JAMES CORCORAN LITTLEJOHN, B. S.
Registrar and Assistant to the President

SAMUEL WILDS EVANS
Bookkeeper

MISS KATHERINE BOCQUET TRESCOT
Librarian

JOHN NATHAN HOOK
Justice Clemson College Corporation

AUGUST SHILLETTER
Steward

FLOYD LONDON CARROLL
Assistant Bookkeeper

JOSEPH JAMES HINEKER*
Sergt. U. S. Army retired, Quartermaster for Cadets

HARRY A. SLOAN**
Quartermaster for Cadets

JAMES PERCIVAL LEWIS
Supt. of Convicts and of Work on Roads and Campus

MISS MARGARET L. SADLER
Secretary to the President

MISS ETTA M. SADLER
Stenographer to Agricultural Department

JAMES GRIFFIN HILTON
Clerk to the Commandant

MISS ANNE ALLSTON PORCHER
Assistant Librarian

MISS PAULINE HUGHES
Stenographer to the Engineering Department

L. BOYD BRANDON, B. S.
Foreman of College Farm

JOSEPH HEWER
Superintendent of Construction and Repairs

WILLIAM P. GOODMAN
College Plumber

---

*Resigned Sept. 30, 1911. **Appointed Oct. 26, 1911.

OFFICERS OF INSTRUCTION*

WALTER MERRITT RIGGS, B. S., E. M. E., LL. D.
President
Consulting Professor of Engineering

ENGINEERING DEPARTMENT

SAMUEL BROADUS EARLE, A. M., M. E.
Director of Department
Professor of Mechanical and Electrical Engineering

HALE HOUSTON, C. E.
Professor of Civil Engineering

RUDOLPH EDWARD LEE, B. S.
Professor of Drawing and Designing, and
College Architect

FRANK TOWNES DARGAN, M. S.
Acting Associate Professor of Electrical Engineering

WILLISTON WIGHTMAN KLUGH, B. S.
Assistant Professor of Drawing and Designing

JOHN WEEMS GANTT
Assistant Professor of Forge and Foundry Work

STYLES TRENTON HOWARD, B. M. E.
Assistant Professor of Machine Shop Work

ANDREW BURCHILL GARDNER
Assistant Professor of Woodwork

FRANCIS RAYMOND SWEENEY, B. S.
Instructor in Civil Engineering

MAHLON THOMAS BIRCH, B. S.
Instructor in Drawing

GEORGE HAMILTON FOLK, B. S.
Instructor in Woodwork

DAVID NIVIN HARRIS, B. S.
Instructor in Drawing

JOHN FRANKLIN ALLISON, B. S.**
Instructor in Forge and Foundry Work

CHARLES A. HEATH§
Instructor in Forge and Foundry Work

---

*The names of the Officers of Instruction are arranged in each department—Professors, Associate Professors, Assistant Professors and instructors. **Resigned Feb. 1, 1912. §Appointed Feb., 1912.

AGRICULTURAL DEPARTMENT

(Combined with the Experiment Station)

WILLIAM ROBERT PERKINS, M. S.*
Director of Department
Professor of Agronomy

JOSEPH NELSON HARPER, M. S. A.**
Director of Agricultural Department and Experiment Station

FRED HARVEY HALL CALHOUN, Ph. D.
Acting Director of Department§
Professor of Geology and Mineralogy

M. RAY POWERS, D. V. S.
Professor of Veterinary Science

ARCHIBALD SMITH
Professor of Animal Husbandry and Dairying

ALBERT FREDERICK CONRADI, B. S. A.
Professor of Entomology

JOHN GALENTINE HALL, M. A.
Associate Professor of Botany and Forestry

CLARENCE CORNELIUS VINCENT, M. S. A.
Associate Professor of Horticulture

JUNIUS MILTON BURGESS, B. S.
Assistant Professor of Animal Husbandry and Dairying

JOHN McGUIRE NAPIER, M. S.
Assistant Professor of Agronomy

WILSON P. GEE, M. S.
Assistant Professor of Entomology

ARTHUR BALLARD MASSEY, B. S.
Instructor in Bacteriology

MURRAY STAR GARDINER, B. S.
Assistant in Agronomy and Farm Mechanics

LOLA ALEXANDER NIVIN, B. S.
Assistant in Horticulture

---

*Resigned Nov. 1, 1911. **Appointed Mar. 12, 1912. §To March 12, 1912.

ACADEMIC DEPARTMENT

CHARLES MANNING FURMAN, A. B
Professor of English
WILLIAM SHANNON MORRISON, A. B.
Professor of History and Political Economy
SAMUEL MANER MARTIN, B. S.
Professor of Mathematics
THOMAS GRAYSON POATS, M. E., E. E.
Professor of Physics
AUGUSTUS G. SHANKLIN, B. S.
Associate Professor of Mathematics
DAVID WISTAR DANIEL, M. A.
Associate Professor of English
THOMAS WADLINGTON KEITT
Assistant Professor of English
ARTHUR BUIST BRYAN, B. S., B. Litt.
Assistant Professor of English
JOSEPH EVERETT HUNTER, B. S.
Assistant Professor of Mathematics
MARK EDWARD BRADLEY, A. B.
Assistant Professor of English
BURR HARRISON JOHNSTONE, A. B.
Assistant Professor of Mathematics
ANDREW BRAMLETT, B. S.
Assistant Professor of Mathematics
ALESTER GARDEN HOLMES, B. S.
Assistant Professor of History

DEPARTMENT OF CHEMISTRY

RICHARD NEWMAN BRACKETT, A. B., Ph. D.
Director of Department
Professor of Chemistry
MARK BERNARD HARDIN
Professor Emeritus of Chemistry
DAVID HILL HENRY, B. S.
Associate Professor of Chemistry
GUY FLEMING LIPSCOMB, B. S.
Assistant Professor of Chemistry
JOHN HARRIS MITCHELL, M. S.*
Assistant Professor of Chemistry
HERBERT J. SMITH, B. S.**
Assistant Professor of Chemistry
BENJAMIN FREEMAN, B. S.
Assistant in Chemistry

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*Appointed Oct. 1, 1911. **Resigned Oct. 1, 1911.

DEPARTMENT OF TEXTILE INDUS ON

CHARLES STEBBINS DOGGETT t)
Director of Department
Professor of Textile Chemistry and Dyei

CLAUDE WIGHTMAN McSWAIN, B. S.
Assistant Professor of Weaving and Designing

FRED TAYLOR
Assistant Professor of Carding and Spinning

MILITARY DEPARTMENT

MARCUS BUTLER STOKES
Captain 10th Infantry, U. S. A., Commandant of Cadets
Professor of Military Science and Tactics

SAM L. DUCKETT
Military Assistant to the Commandant

PREPARATORY CLASS

LAWRENCE ANDREW SEASE, B. S.
Assistant Professor of English
Headmaster of Preparatory Class

BENJAMIN JOHNSTON WELLS, L. I., A. B.
Instructor Preparatory Class

STUDENT ASSISTANTS AND LABORATORY ASSISTANTS

EDDIE H. SHULER, B. S.
Mechanical and Electrical Laboratory Assistant

J. A RILEY, B. S.
Student Assistant to Entomologist

JAMES. W. HARRISON, B. S.
Student Assistant to Director of Engineering Department

GEORGE COCHRAN FANT, B. S.
Student Assistant. Physics Division

JOHN DREHER SHULER, B. S.
Student Assistant. Agricultural Department

LANDY BOYD ALTMAN, B. S.
Student Assistant. Agricultural Department

ING COMMITTEES TO THE PRESIDENT

esident is **ex officio** a member of each committee. The
in each instance is chairman.)

Discipline
resident, the Commandant, Brackett, Calhoun, Doggett, Earle, Furman, Hardin, Harper, Houston, Martin, Morrison

Re-Examinations and Promotions
Martin; Brackett, Dargan, Doggett, Earle, Furman, Harper, Houston, Littlejohn, Morrison

Entrance Requirements
Furman; Calhoun, Harper, Littlejohn, Martin, Morrison, Sease

Schedule
Morrison; Brackett, Bramlett, Keitt, T. W., Lee, McSwain, Poats, Powers

Library
Bryan; Calhoun, Earle, Henry, Keitt, T. E., Taylor

Irregular Students
Hunter; Klugh, Lipscomb, Napier, Poats

Catalog
Doggett; Brackett, Bryan, Earle, Littlejohn, Powers

Student Recreation
Henry; Calhoun, Holmes, Houston, Lipscomb, the Commandant

Athletics
Calhoun; Gantt, Johnstone, Poats, Shanklin

Student Publications
Keitt, T. W.; Bradley, Holmes

Religious Services
Earle; Bradley, Burgess, Holmes, Wells

Chapel Music
Daniel; McSwain, Taylor

Chapel Entertainments
Daniel; Houston, Johnstone, Martin, Powers

State Fair
Howard; Burgess, Conradi, Napier, McSwain, the Commandant, Smith, A.

Campus
Houston; Hall, Newman

Reception
Harper; Brackett, Daniel, Stackhouse, the Commandant

Alumni
Lee; Bryan, Burgess, Henry, Klugh

Museum
Calhoun; Barre, Gee, Hall, Napier

Text Book
Shanklin; Gee, Mitchell

SOUTH CAROLINA
AGRICULTURAL EXPERIMENT STATION
(Combined with the Agricultural Department)

Station Staff

JOSEPH NELSON HARPER, B. S., M. S. A.
Director and Agriculturist

CHARLES CARTER NEWMAN, B. S.
Horticulturist

ALBERT FREDERICK CONRADI, B. S. A., M. S.
Entomologist and Zoologist

HENRY WALTER BARRE, M. S.
Botanist and Plant Pathologist
ARCHIBALD SMITH
Animal Husbandman to the Station

THOMAS ELLISON KEITT, B. S.
Chemist

EDWARD REID LLOYD, Jr., B. S.
Assistant in Animal Husbandry

WILLIAM ANDREW THOMAS, B. S.
Field Entomologist

LAWRENCE ORR WATSON, B. S.
Field Pathologist

FRANK GREEN TARBOX, B. S.
Assistant to Agriculturist

WILLIAM BARRE AUL~~D~~L, B. S.
Assistant to Botanist

WILLIAM D. GARRISON, B. S.
Superintendent Coast Experiment Station

MISS HELEN C. BRADFORD
Stenographer

BURNS GILLISON
Foreman Experiment Station Farm

PUBLIC STATE WORK

Division of Farmers' Institutes and Extension Work

WILLIAM ROBERT PERKINS, M. S.*
Director

JOSEPH NELSON HARPER, M. S. A.
Director

DAVID NICHOLAS BARROW, B. S.**
Superintendent

WILLIAM LESLIE ENGLISH, B. S.
State Agent of the Farmers' Co-operative Demonstration Work
and Superintendent of the Division of Farmers' Institutes
and Extension Work

CHRISTOPHER BRADSHAW HADDON, B. S.
Acting Superintendent
Special Agent in charge of Boys' and Girls' Demonstration Work in
Co-operation United States Farm Demonstration Work

THOMAS FLETCHER JACKSON, B. S.
Assistant in Animal Husbandry

RALPH HEDGES MASON, B. S.
Junior Dairyman, U. S. Department of Agriculture

LOLA ALEXANDER NIVIN, B. S.
Assistant in Horticulture

HENRY C. EAGERTON, B. S.
Assistant in Entomology

MISS DOROTHY MONTGOMERY
Stenographer

Demonstration Agents of the Farmers' Co-operative Demonstration Work of the Bureau of Plant Industry, United States Department of Agriculture working in co-operation with Clemson College

State Agent

WILLIAM LESLIE ENGLISH, B. S.
State Agent of the Farmers' Co-operative Demonstraition Work
and Superintendent of the Division of Farmers' Institutes
and Extension Work

Clemson College, S. C.

---

*Resigned. **Resigned.

PUBLIC STATE WORK

(Division of Farmers' Institutes and Extension Work—Continued)

District Agents

Name	Headquarters	Territory
Baker, L. L.	Bishopville	S. E. Part of State
Barton, W. H.	Simpsonville	N. W. Part of State
Elliott, W. R.	Winnsboro	Central Part of State

Local Agents

Name	Headquarters	Territory
Allston, R. L.	Georgetown	Georgetown County
Antley, A. O.	St. Matthews	Calhoun County
Baggott, J. O.	Saluda	Saluda County
Blair, J. R.	Sharon	York County
Brown, E. A.	Camden	Kershaw County
Carnell, F. W.	Union	Union County
Cappell, L. C.	Lykesland	Richland County
Chitty, W. B.	Olar	Bamberg County
Cunningham, R. L.	Chester	Chester County
Derrick, G. A.	Lexington	Lexington County
Duncan, S. M.	Newberry	Newberry County
Dusenbury, Chas.	Conway	Horry County
Epps, T. O.	Kingstree	Williamsburg County
Frampton, W. M.	Charleston	Charleston County
Harmon, J. W. P.	Montmorenci	Aiken County
Harris, J. W.	Spartanburg	Spartanburg County
Hayes, J. M.	Dillon	Dillon County
Holland, M. G.	Walhalla	Oconee County
Hudson, B. M.	Pinopolis	Berkeley County
Lambert, J. H.	Marion	Marion County
Lever, W. T. J.	Blythewood	Richland County
Lemmon, R. H.	Winnsboro	Fairfield County
Lott, P. N.	Johnston	Edgefield County
McAlhany, D. L.	St. George	Dorchester County
McCluney, F.	Gaffney	Cherokee County
McCoy, J. K.	Chesterfield	Chesterfield County
McFaddin, C. A.	Manning	Clarendon County
McManus, C. L.	Lancaster	Lancaster County
Muldrow, J. B.	Darlington	Darlington County
Price, B. G.	Walterboro	Colleton County
Reid, S. F.	Abbeville	Abbeville County
Rothrock, J. W.	Pendleton	Anderson County
Sanders, A. M.	Banwell	Barnwell County
Shealey, J. W.	Ballentine	Lexington County
Stewart, W. P.	Simpsonville	Greenville County
Tarrant, D. L	Springfield	Orangeburg County
Watts, Jno. D. W.	Laurens	Laurens County
Welsh, S. N.	Elliott	Lee County
White, R. D.	Alcolu	Clarendon County
Williams, J. A.	Dacusville	Pickens County
Williams, J. F.	Sumter	Sumter County
Woodley, J. A.	Tatum	Marlboro County

(PUBLIC STATE WORK—Continued)

FERTILIZER CONTROL

RICHARD NEWMAN BRACKETT, Ph. D.
Chief Chemist

BENJAMIN F. ROBERTSON, B. S.
Chemist

COKE SMITH LYKES, B. S.
Assistant Chemist

CLAUD FURMAN INMAN, B. S.
Assistant Chemist

JOHN TREUTLEN FOY, B. S.
Assistant Chemist

HUGH MILTON STACKHOUSE
Secretary Board of Fertilizer Control

WILLIAM BENJAMIN WEST
Chief Fertilizer Inspector

MISS MARGARET E. GASQUE
Stenographer to Secretary Board of Fertilizer Control

STATE CONTROL OFFICERS

DR. RICHARD NEWMAN BRACKETT
State Chemist

ALBERT FREDERICK CONRADI, M. S.
State Entomologist

WILSON P. GEE, M. S.
Assistant State Entomologist

DR. M. RAY POWERS
State Veterinarian

DR. ROBERT OLIVER FEELEY
Assistant State Veterinarian

DR. WILLIAM FORREST BURLEIGH
Assistant State Veterinarian

MINISTERS FOR THE SESSION 1911-1912

BAPTIST	Rev. T. V. McCaul
EPISCOPAL	Rev. R. M. Marshall
METHODIST	Rev. P. A. Murray
PRESBYTERIAN	Rev. W. H. Mills

COMMENCEMENT SPEAKERS—JUNE 1912

Baccalaureate Sermon

Dr. H. M. DuBose, Augusta, Georgia

Commencement Address

Dean H. L. Russell of the University of Wisconsin,
Madison, Wisconsin

REGIMENTAL ORGANIZATION

1911-'12

CAPTAIN M. B. STOKES
U. S. Army, Commanding

REGIMENTAL STAFF

J. E. M. Mitchell	Captain and Adjutant
H. T. Prosser	Captain and Quartermaster

NON-COMMISSIONED STAFF

H. A. Hagood	Sergeant-Major
A. B. Evans	Quartermaster Sergeant
L. R. Blackmon	Color Sergeant
H. G. Boyleston	Color Sergeant

FIRST BATTALION

MAJOR E. G. LITTLEJOHN

T. C. Redfern	Adjutant
C. P. Youmans	Sergeant-Major

Co. A	Co. B	Co. C	Co. D
CAPTAINS			
J. M. Workman	W. R. Gray	J. C. Caldwell	L. S. David
LIEUTENANTS			
E. E. Hamlin	J. T. Lazar	J. A. Bates	H. S. Kennerly
A. J. Brown	T. S. Evans	C. H. Stanton	H. C. Jennings
1st SERGEANTS			
S. W. Rabb	M. S. Lawton	J. O. Erwin	W. E. Morrison
SERGEANTS			
W. B. Britt	T. B. Wilson	G. E. Frick	C. S. Patrick
C. K. Dunlap	E. T. Provost	C. E. Stoudemire	W. W. Herbert
M. D. Berry	C. J. King	O. Jacobs	H. J. Bomar
F. M. Mellett	J. E. Brodie	W. D. Banks	T. Perry
CORPORALS			
F. J. Jervey	J. B. Douthit	L. R. Free	F. B. Hutto
J. C. Barksdale	B. P. Barron	B. R. Lever	E. M. James
A. R. Boyd	B. W. Brown	M. A. Dantzler	W. H. Rice
J. W. Simmons	R. H. Hood	C. C. Thornton	J. D. Smith
J. E. Dunlap	J. T. Witherspoon	W. T. P. Sprott	G. H. Brown

SECOND BATTALION

MAJOR A. P. FANT

W. H. Privette .... Adjutant
J. H. Kangetter .... Sergeant-Major

	Co. E	Co. F	Co. G	Co. H
CAPTAINS	B. R. Bacot	J. A. Simpson, 1st	H. M. Hutson	T. C. Adams
LIEUTENANTS	J. N. Stribling	A. K. Goldfinch	J. F. Ezell	N. K. Rowell
	L. F. Yates	G. W. Byars	O. F. McCrary	D. B. Hill
1st SERGEANTS	P. E. Myers	T. F. Davis	J. W. Barnwell	F. H. Lathrop
SERGEANTS	F. H. Robertson	P. S. Hale	A. H. Lachicotte	T. F. Massey
	H. F. Rivers	J. A. Magill	A. J. Evans	W. H. Frampton
	J C. Fitzsimmons	J. W. McClure	W. E. Bowers	W. G. McLeod
	B. M. Jones	J. W. Perrin	J. N. Todd	M. F. Sanders
CORPORALS	J. M. Smith	J. G. Oetzel	J. H. Hollingsworth	J. N. McBride
	J. E. Fletcher	A. H. Jackson	J. T. Woodward	C. R. Rogers
	T. W. Thornhill	J. M. McIntosh	W. F. Lachicotte	B. G. Field
	E. D. Buckley	L. C. Pearlstine	R. G. Kennedy	H. Bethea
	S. L. Greene	A. G. Stanford	J. Ward	L. E. Williams

THIRD BATTALION

MAJOR E. W. TISON

F. L. Ross .... Adjutant
D. L. Cannon .... Sergeant-Major

	Co. I	Co. K	Co. L	Co. M
CAPTAINS	E. P. Josey	J. B. Wakefield	C. B. Faris	J. R. Crawford
LIEUTENANTS	A. G. Small	J. H. Gage	T. E. Bell	E. D. Mays
	S. M. Connor	D. T. Hardin	G. H. Zerbst	W. D. Ezell
1st SERGEANTS	R. Robison	T. C. Gentry	J. L. Seal	J. L. Hiers
SERGEANTS	R. W. Fant	P. M. Carpenter	S. E. Harrison	W. H. Rentz
	A. D. Park	S. K. Brown	W. T. Kyzer	J. K. Boggs
	R. A. Alexander	F. Hodges	F. W. Bouson	A. C. Turbeville
	G. M. Anderson	W. C. Gilmore	C. G. Faris	H. S. McGee
CORPORALS	F. P. Crawford	B. M. Jackson	W. J. Rivers	A. H. Ward
	J. W. Erwin	J. Y. Scruggs	R. B. Ezell	T. C. Haddon
	E. H. Pressley	E. R. Gilmore	A. P. Gandy	H. L. Parker
	W. D. Wood	M. R. Smith	A. L. Edwins	C. F. Mitchell
	J. W. Willis	G. J. Sheppard	D. L. White	L. H. Koger

CADET BAND

H. S. Davis	1st Lieut. and Chief Musician
L. D. Hutson	Drum Major
L. F. Wolfe	Sergeant
H. L. Smith	Corporal

W. D. Bryant	Solo Bb Cornet
O. H. Beymer	First Bb Cornet
C. W. Baker	First Bb Cornet
A. W. Ford	Second Bb Cornet
F. L. Bunker	Second Bb Cornet
J. M. Drakeford	First Bb Clarinet
L. F. Wolfe	Baritone
C. H. Harty	First Trombone
J. S. Moore	First Trombone
W. B. Wilkerson	Second Trombone
H. L. Smith	First Eb Bass
M. Coles	First Eb Alto
G. C. McDermid	Second Eb Alto
H. M. Chapman	Second Eb Alto
W. W. Bates	Third Eb Alto
H. C. Lewis	Bb Tenor
V. F. Bryant	Bb Tenor
H. R. Stender	Fourth Bb Alto
W. P. Stradley	Bass Durm
H. S. Davis	Snare Drum
J. D. Pinckney	Symbals

HISTORICAL SKETCH

Thomas G. Clemson, after whom the College is named, was born in Philadelphia in April, 1807, and died at the Fort Hill home April 6, 1888.

In 1823, then scarcely 16 years old, he ran away from home, and, after spending some time in England, went to Paris, where he took up arms in the revolutions of that time. His gallantry brought him recognition and the friendship of prominent men, resulting in his being given a course in the celebrated School of Mines in Paris. In this school he remained four years, graduating with high honors.

While he was in Europe, his father died, leaving nothing to him in his will. Soon after this he returned to Amercia, and establishing himself in Washington, practiced his profession of Mining Engineer, and accumulated a comfortable fortune. It was here that he met Miss Anna Marie, the eldest daughter of John C. Calhoun, and married her. Two children resulted from this union—a daughter Floride, who afterwards became Mrs. Gideon Lee, of New York, and a son, John Calhoun Clemson.

Mr. Clemson was a strong advocate of the political doctrine of Mr. Calhoun, and when the war broke out, fearing arrest, he and his son escaped by night in a boat, and walking to Richmond, offered their services to President Davis. Mr. Clemson was assigned to the Trans-Mississippi Nitre Mining Department, where he served until the end of the war. His son was appointed a Lieutenant and assigned to active duty.

At the end of the war, Mr. Clemson with his family came to Pendleton and resided with Mrs. John C. Calhoun until her death in 1866.

Mr. Clemson was interested as far back as this date in the establishment of an Agricultural and Industrial College. In November 1886, a Committee was appointed, consisting of

Hon. Thomas G. Clemson, Hon. R. F. Simpson and Col. W. A. Hayne, to appeal to their fellow citizens for

"Aid to found an institution for educating our people in the Sciences, to the end that our Agriculture may be improved, our worn and improvised soils be recuperated, and the great natural resources of the South be developed."

In January 1867, at a meeting of the Pendleton Farmers' Society, Mr. Clemson addressed the body in "an able and most interesting and instructional discourse," and submitted in the form of a circular the appeal above referred to. The circular was written by Mr. W. H. Trescot, and closes with the words:

"Letters and contributions to be directed to the Hon. Thos. G. Clemson, LL. D., Chairman of the Committee, Pendleton, Anderson District, South Carolina."

Again in the minutes of the same Society, of which he was elected President in 1868, under date of Oct. 14, 1869, we find the following:

"The President, (Mr. Clemson), entertained the Society for half an hour on the subject of Scientific Agriculture, and the Importance of Scientific Agricultural Education."

These citations indicate an early interest on the part of Mr. Clemson in the great cause to which he later devoted his estate.

Previous to the war Mrs. John C. Calhoun had sold the Fort Hill place and negroes to her son, Col. Andrew P. Calhoun, taking in payment his bond and mortgage for $40.000. At her death, she left a will, which resulted in her daughter Mrs. Clemson, getting three-fourths of the value of this bond and mortgage, and her granddaughter, who at the time of Mrs. Calhoun's death was Mrs. Gideon Lee of New York, the remaining one-fourth.

Shortly after Mrs. Calhoun's death, which was followed by the death of Col. A. P. Calhoun, Mrs. Thomas G. Clemson, after considerable costly litigation foreclosed the mortgage on the Fort Hill place, and at the sale of property in Walhalla in January 1872, Mr. Clemson, as Trustee for his wife and daughter, bid it in for $15,000*, and he himself paid out of

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***See Title Book Oconee County, P. 177-F.**

his private funds $8,000 to cover lawyer's fees, court cost, etc.

In 1871, Mr. Clemson's daughter, then Mrs. Lee, died, and seventeen days after, his only son, John Calhoun Clemson, was killed in a railroad accident at Seneca. Left childless, Mrs. Clemson willed to her husband, Thomas G. Clemson, all of her estate "absolutely and in fee simple."*

Mr. Clemson, in his will, left to his granddaughter, Floride Isabella Lee, $15,000 to free the property, which by the same will was donated to the State, from any claim in equity that the granddaughter might have. This was, of course, in addition to one-fourth of the estate which descended to Miss Lee from her mother, who acquired it under the terms of the original will of Mrs. Calhoun, and additional to the $8,000 paid out by Mr. Clemson for fees, court costs, etc., when the entire estate was bought in.

Neither by intention, nor by donation, nor by any form of hereditary transmission does it anywhere appear that John C. Calhoun had anything to do with the founding of the College which bears Clemson's name.

In 1875 Mrs. Clemson died, and on April 6, 1888, Mr. Clemson followed her to the grave, and was buried in the Episcopal church yard at Pendleton.

Mr. Clemson's will was bitterly contested by the Lee family, but was finally fully sustained by the Supreme Court. After the settlement of the will, the Trustees of the College bought from Miss Floride Isabella Lee her one-fourth of the estate which adjoined the tract given to the State by Mr. Clemson.

The following extracts are made from Mr. Clemson's will** in order to show clearly his purpose in offering his property to the State for the founding of the Clemson Agricultural College.

* * * * "Feeling a great sympathy for the farmers of this

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*See Judge of Probate's Office, Oconee Co., Apartment 26, Package 287. **See Judge of Probate's Office, Oconee Co., Apartment 64, Package 671.

State, and the Difficulties with which they have to contend in their efforts to establish the business of agriculture upon a proper basis, and believing that there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill Place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education, and should be a high seminary of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in through theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. But I desire to state plainly, that I wish the Trustees of said institution to have full authority and power to regulate all matters pertaining to said institution, * * * * but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agriculture and mechanical industries." * * * *

"I therefore give * * * * the aforesaid Fort Hill place where I now reside, formerly the house of my father-in-law, John C. Calhoun, consisting of eight hundred and fourteen acres, more or less, in trust that whenever the State of South Carolina may accept said property as a donation from me, for the purpose of thereupon founding an Agricultural College, in accordance with the views I have hereinbefore expressed, (of which the chief justice of South Carolina shall be the Judge,) then my executor shall execute a deed of the said property to said State and turn over to the same all property hereinafter given as an endowment of said institution, to be held as such by the said State so long as it in good faith devotes said property to the purpose of the donation." * * * *

"The following named gentlemen, seven in number, shall be seven of the Board of Trustees, to wit R. W. Simpson, D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker, and J. E. Bradley; and the State, if it accepts the donation, shall never increase the Board of Trustees to a number greater than thirteen in all, nor shall the duties of the said Board be taken away or conferred upon any other men or body of men. The seven Trustees appointed by me, shall always have the right, and the power is hereby given them and their successors, which right the Legislature shall never take away or abridge, to fill all vacancies which may occur in their number by death, resignation, refusal to act, or otherwise. But the Legislature may provide as it sees proper for the appointment or election of the other six Trustees, if it accepts the donation * * * * The name of this Institution is to be "The Clemson Agricultural College of South Carolina."

In the codicil to his will, Item 12, occurs the following significant statement:

"The desire to establish such a school or college as I have provided for in my said last will and testament, has existed with me for many years past, and many years ago I determined to devote the bulk of my property to the establishment of an Agricultural School or College. To accomplish this purpose is now the one great desire of my life."

In November 1889, the General Assembly of South Carolina passed the necessary acts authorizing the acceptance of the terms of Mr. Clemson's will, and the establishment of the College. The following extracts are taken from the State laws relating to the College:

Section 1300: "The Honorable Thomas G. Clemson having departed this life on the sixth day of April, A. D. 1888, leaving of force his last will and testament * * * * wherein he devised and bequeathed the Fort Hill plantation, as well as all his other property, both real and personal, except certain legacies in the said will mentioned and provided for, all in trust to convey to the State of South Carolina when the said State shall accept the same for the purpose of establishing and maintaining an Agricultural and Mechanical College upon the aforesaid Fort Hill plantation upon the terms and conditions of said will, **the State of South Carolina hereby expressly declares that it accepts the devise and bequest of Thomas G. Clemson, subject to the terms and conditions set forth in his last will and testament."** * * * *

"Section 1302: The said College shall be under the management and control of a Board of Thirteen Trustees composed of the seven members nominated by said will and their successors and six members to be elected by the Legislature in Joint Assembly."

"Section 1304: That it shall require a two-thirds vote of said Board of Trustees to authorize the expenditure of any moneys appropriated to said College by the State, or to authorize the sale or transfer or re-investment of any property or moneys arising from the sale of any property under the provisions of this Act."

"Section 1319: All the privilege tax on fertilizers heretofore required to be paid to the Commissioner of Agriculture shall in the future be paid to the Treasurer of the State, subject to the order of the Board of Trustees of the Clemson Agricultural College of South

Carolina; and so much of the money so received as shall be necessary to defray the expenses of the Board in performing the duties now by this Act devolved upon them shall be thus used, and the balance shall go to the said College, for its erection and maintenance."

It will be seen from the above extracts that the State accepted in good faith the terms of Mr. Clemson's will, a feature of which was the maintenance of the College, and recognition of the self-perpetuating life membership appointed by Mr. Clemson.

One of the early official acts of the Board was the passage of a rule that nine votes be required not only to appropriate money, as required by the State Law, but to elect any officer of the College as well. This rule was adopted that there might be no just criticism of domination by the Life Trustees.

HISTORY OF THE COLLEGE

The College was opened in July 1893, with an enrollment of 446 students. The session extended from the third Thursday in February to the third Thursday in December, with the idea of giving all students in Agriculture an opportunity to be instructed in the practical phases of that subject during the crop growing season.

On the night of May 22, 1894, the main College building was burned, but the regular work continued, and the building was promptly re-built.

The first graduating exercises were held in December 1896, the graduating class numbering thirty-seven,—fifteen in the Agricultural Courses, and twenty-one in the Engineering Courses. In the fall of 1897, the session was changed to begin the second Wednesday in September and close the second Wednesday in June, as it had been found inadvisable to operate the College through the hot summer months. The exercises of the second commencement, which would normally have occurred in December 1897, were held Feb. 6 to 9, 1898. The under-graduate classes were continued until June. It will be observed that, owing to the change from winter to summer vacation, there was no class graduated in 1897.

Since 1898 the annual commencement exercises have been held regularly in June, but the closing day was afterwards changed to the first Tuesday, instead of second Wednesday, and in the session of 1910-11 to the second Tuesday.

The College has been in continuous operation, and is now in its nineteenth session. During this time, the average enrollment has been 567, and the total 10,738, and the total number of graduates, (estimating the number for the present session at 94), is 860 distributed as follows:

In the Agricultural Courses 346; in the Engineering Courses 420; in the Textile Courses 94.

The table on the following page gives accurate information as to the attendance, number of graduates, etc.

Session	Total Enrollment	Graduates by Courses							Total Graduates
		Agriculture	Agriculture & Chemistry	Agri. & Animal Industry	Mech. & Electrical Eng	Civil Engineering	Chemistry & Geology	Textile Industry	
1893	446	0	0	0	0	0	0	0	0
1894	635	0	0	0	0	0	0	0	0
1895	370	0	0	0	0	0	0	0	0
1896	350	15	0	0	22	0	0	0	37
’97-’98	*449	15	0	0	10	0	0	0	25
’98-’99	446	6	0	0	7	3	0	0	16
’99-’00	461	12	0	0	12	0	0	4	28
’00-’01	483	9	0	0	13	0	0	9	31
’01-’02	500	12	0	0	28	2	0	17	59
’02-’03	539	7	0	0	28	5	0	20	60
’03-’04	605	4	0	0	26	2	0	5	37
’04-’05	637	5	0	0	21	8	1	5	40
’05-’06	652	18	0	0	20	15	0	7	60
’06-’07	658	28	0	0	25	15	0	1	69
’07-03	690	53	0	7	12	12	1	0	85
’08-’09	648	9	8	10	17	8	3	0	55
’09-’10	653	13	10	10	22	19	1	2	77
’10-’11	703	19	7	18	18	8	4	13	87
’11-’12	813	21	17	14	18	10	3	11	94
Totals	10738	246	42	59	299	107	13	94	860

By an act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of $100 per annum each, and free tuition, apportioned among the counties in the same manner as the members of the Senate and House of Representatives. This number has since been increased to 167, by the creation of three new counties.

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*Feb. 8, to July 15, 1897 and Aug. 15, 1897, to June 8, 1898.

ORGANIZATION OF THE COLLEGE

1. **Agricultural Department and Agricultural Experiment Station**
    - Agriculture
    - Geology and Mineralogy
    - Horticulture
    - Veterinary Science
    - Zoology and Entomology
    - Dairy and Animal Husbandry
    - Botany, Forestry and Bacteriology
    - Extension Work and Farmers' Institutes
2. **Engineering Department**
    - Electrical Engineering
    - Mechanical Engineering
    - Civil Engineering
    - Drawing and Designing
    - Forge and Foundry Work
    - Machine Work
    - Wood Work
3. **Chemical Department**
    - Chemistry
    - Metallurgy
4. **Textile Department**
    - Carding and Spinning
    - Weaving and Designing
    - Textile Chemistry and Dyeing
5. **Academic Department**
    - English
    - History and Political Economy
    - Mathematics
    - Physics
6. **Military Department**
    - Military Science and Tactics

Organization and Mode of Government

Board of Trustees. This board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations.

The President is the executive head of the College, and has general supervision of all matters within and pertaining to the College, and is charged with executing all rules and regulations passed by the Board of Trustees.

The College is divided into six departments, namely: I. Agricultural and Experiment Station; II. Engineering; III. Chemical; IV. Academic; V. Textile; VI. Military. A Director is at the head of each department, and is responsible to the President for its conduct and success. The departments comprise the various divisions indicated on the preceding page. The divisions are in the immediate charge of the Professors, Associate and Assistant Professors, and Instructors of the respective departments. The President conducts all official business with each department through its Director.

The General Faculty shall consist of the President, Commandant, Professors, Associate and Assistant Professors.

This Faculty shall meet at least once a month, and whenever called by the President, and shall be an advisory body to the President on such matters connected with the instructional work of the college as may be brought before them.

The Discipline Committee shall consist of the President, the Commandant, the Directors of the Agricultural, Engineering, Chemical and Textile Departments, and six Professors nominated by the President and approved by the Board.

This Committee shall try students charged with serious offenses, and shall be empowered to award such punishment for serious offenses as in their judgment shall be merited. The Commandant shall present the case to the Committee, summon witnesses, and in general act as prosecuting attorney, but shall not vote in the findings.

The Discipline Committee shall also constitute the "Senior

Faculty," who shall meet at the call of the President to consider any matter of College interest that he may bring before them. They shall have a right to review any action of the General Faculty.

In order to aid him in his executive duties the President appoints Committees from the Officers of Instruction, to which are assigned certain specified lines of work.

The students are allowed wide latitude in carrying on affairs which concern themselves, such as athletic, literary, musical and social organizations. The aim of the Faculty is to assist in every possible way in making these interests helpful to the student body as a whole. In these matters the disposition is to allow a reasonable amount of time for recreation, and to contribute as far as possible towards making the students contented and happy.

Military Organization and Mode of Government

The following extracts from the Regulations for the Government of Cadets explain the organization and mode of government of the corps:

"1. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction."

"2. The Commandant of Cadets, under the President of the College, has immediate command and control of the corps of cadets in all that pertains to its organization, drill, military police, discipline and administration. He is charged with the instruction of the cadets in the theoretical military course and in all practical military exercises. He will prescribe the order in which the furniture, bedding, books, clothing, equipments, etc. shall be arranged throughout the barracks, and shall, in person, make a minute and thorough inspection of the rooms, furniture, arms and accoutrements, etc. of the cadets at least once each week, and make a report thereon to the President."

"3. The organization of the corps of cadets will, as far as practicable, conform to that of a regiment of infantry of the regular army.

"4. The cadet officers and non-commissioned officers will be appointed by the Commandant of Cadets, subject to the approval of the President of the College. The selection for these positions will be made from those cadets who have been most studious and soldier-like in the performance of their duties, and most exemplary in their general deportment.

"5. As a rule, the cadet captains and lieutenants will be selected from the senior class; the non-commissioned staff and the sergeants from the junior class; and the corporals from the sophomore class."

Leave of Absence

I. Except in cases of emergency or necessity students will as a rule be granted leave of absence only on authorized holidays. On such occasion no student will be granted a leave of absence:

(a) Who has recorded against him more than 8 demerits for the preceding 30 days.

(b) Who is not making satisfactory progress in his classes.

(c) Who has any confinements or extras to be served or who is under arrest.

(d) Who has abused any leave of absence previously given.

II. In case of a holiday, release from study hours will be given on the preceding evening, and study hours will be observed on the evening of the holiday.

III. All communications from parents requesting leave of absence for their sons must be addressed and sent directly to "The Commandant" or to "The President," and must set forth fully the reasons for the request. No leave will be granted unless the reasons given are considered satisfactory and sufficient justification for any loss of time or duty involved.

IV. An honorable discharge will be granted to students under age, only upon the written request of the parent or guardian addressed directly to the President of the College. The parent need not give reasons for the request unless he cares to do so.

(The parent's request for an honorable discharge, which means severing the student's connection with the College, must be had in such form as to become a matter of permanent College record. Therefore a letter from a parent to a student expressing willingness for him to get an honorable discharge will not be accepted in lieu of the direct authorization above described. It is very important for the future interests of a student that the circumstances of his withdrawal from the College be made a matter of clear and permanent record.)

V. The President will not consider permits unless they have first passed through the Commandant's Office.

A student who has been granted leave of absence and who stays over the time allowed, unless for sickness or other good and valid reasons acceptable to the President, will lose his place in the College, and will be required to file a new application for admission, and pay the matriculation fee of $5 again before being allowed to re-enter. In case he has been sick, a certificate from the attending physician must be submitted. In every case, notice must be sent to the President or to the Commandant before the student is due to return.

General Regulations

The "Rules and Regulations for the Government of Cadets," a copy of which is furnished each cadet, contains the following:

Cadets must at all times be respectful in their bearing to professors and other officers of the College.

Cadets are subject to military discipline at all times, and are required to take part in drill, guard duty and other military exercises.

All undergraduate students are required to board in the barracks, except those who live with their parents or relatives near enough to attend from their homes.

No trunks, bags or boxes will be allowed in the rooms of cadets. Trunk rooms accessible at stated times are provided for storing trunks.

The practice of hazing is positively forbidden. Any cadet indulging in this practice will be dismissed from the College.

If any cadet shall consider himself wronged by another, or by any officer of the College, he has the right to complain thereof in writing to the President, who will examine into the complaint and take such measures for redressing the wrong as he may deem proper.

All combinations of cadets for the purpose of censuring one of their number are prohibited; also all combinations to defeat the purpose of any regulation of the College.

Cadets are forbidden to keep in their possession any firearms or other weapons not issued by the proper authority.

The College rules require that all students be vaccinated, and parents are advised to have this done before sending their sons away from home.

Any cadet who leaves barracks without authority between taps and reveille shall be dismissed.

Cadets are positively forbidden to use, or have in their possession, intoxicating liquors of any description.

Profanity and gambling are positively forbidden.

The smoking of cigarettes is positively forbidden. During the hours from 9:00 A. M., to 1:00 P. M., and from 2:00 P. M., to 5:00 P. M., cadets will not be permitted to smoke on the campus or in the college buildings.

Cadet "limits" is defined as all the college lands with certain excepted places. Cadets not otherwise prohibited are permitted during release from quarters to be on the above mentioned grounds without special permission.

Demerits will be awarded for every unremoved report, the number depending on the nature and the degree of the offense.

Any cadet receiving 67 demerits during any term shall be brought before the Discipline Committee, and shall be dismissed or less severely punished.

Cadets who receive no demerits for the period of one month (30 days) will be given a credit of eight demerits, to be applied in removing any demerits that may have been charged against them during that term.

For infraction of rules cadets are punished according to the gravity of the offense.

Punishment consists of demerits and in addition, confinements (detention of cadet in his room), confinement to barracks or other specified limits, reprimands, extras, (walking equipped as sentinel), reduction to ranks (for officers and noncommissioned officers), arrest, close arrest, suspension, and dismissal form college.

Punishment for ordinary offenses will be awarded by the Commandant of Cadets, and for serious offenses by the President or Discipline Committee, according to the nature of the case.

The Commandant and his officers have the right to inspect anything in a cadet's room.

ADMISSION OF STUDENTS COURSES OF STUDY, FEES, ETC.

General Requirements

Candidates for admission must be sixteen years of age.

Students desiring to enter college should apply to the President for application blanks, and these, properly filled out, should be returned to the President as early in the summer as possible, and in no case later than August 14th.

Certificates of good moral character are required of all candidates not known to members of the Faculty; and if the candidate comes from another college, this certificate must show that he was honorably discharged.

In selecting students who shall be admitted to the College subject to their passing the required examniations, the following rules, prescribed by the Board of Trustees, will govern:

1. Students must undergo a medical examination, and no student will be admitted who is not healthy and free from contagious diseases including tuberculosis.

2. Students will be apportioned among counties in proportion to representation in the House of Representatives, under the following rules and regulations:

(a) Applicants prepared to enter College classes will have preference over those who enter only the preparatory class.

(b) As between applicants of equal preparation, the eldest will have the preference.

(c) Other things being equal, the first applicants will receive permission to enter.

(d) When a county has not sent its quota, the places thus left shall be apportioned among the other applicants.

(e) Provided a sufficient number of applicants from the State to fill the barracks do not apply, then students from other states may be admitted, and when so admitted, may continue in College until they complete their course.

(f) Applicants not entering within ten days after the opening of the session will have their rights in the place given to applicants next on the roll.

Students upon arrival at the College at the opening of the session must report at once to the Registrar's office and matriculate before they will be assigned to quarters in the barracks. No student will be admitted to any of the classes or examinations of the College before matriculation and payment of fees. (See page eleswhere.)

Matriculation is equivalent to a pledge to conform to the rules of the College.

Entrance Requirements

For admission to the freshman class a thorough knowledge is required of arithmetic, elementary algebra, English grammar, geography and history of the United States.

Admission on Certificate

Candidates sending a certificate signed by the principal or superintendent of any State High School in South Carolina, or from any other High School, Preparatory School or College, are not required to take the examinations, **provided**, the work as shown on the certificate is satisfactory to the Entrance Requirements Committee. This certificate must be on the prescribed form furnished from the Registrar's Office. Mail all certificates or applications to the President or to the Registrar, Clemson College, S. C.

Admission by Examinations

All other candidates will be required to stand the entrance examinations at their County Seats or at the College. The entrance examinations are held at the County Seats on the second Friday in July along with the scholarship examinations. Applicants are advised to stand the examinations then. **Write for copies of old examination questions.**

If an applicant passes on a majority of subjects, he will be given at the College a re-examination upon those subjects in which he failed. If he is unprepared he will be saved the expense of a trip to Clemson.

A careful study of the work outlined below will greatly assist those preparing to take the examinations.

Arithmetic.—The applicant is expected to have a thorough practical acquaintancee with all of the ordinary principles and operations of arithmetic. Milne's Progressive Arithmetic, Book Three, is recommended as a suitable text-book.

Algebra.—A thorough knowledge of the elementary principles of algebra is required. Students fail on entrance examinations and class work more frequently because of imperfect knowledge of the subject matter passed over, than because they have not gone far enough in the text-book. A thorough mastery of the subject as presented in Well's Algebra for Secondary Schools, Part One, through quadratic equations (to page 260) will be considered adequate.

English.—Applicants are examined in spelling, oral reading, and grammatical forms. They are supposed to have been thoroughly drilled in parsing and sentence analysis as given in Buehler's Grammar or some work of equal grade. A general review of such a text-book during the summer preceding would greatly increase the probability of passing in September. Applicants are required to write short essays on subjects assigned at that time.

Geography.—Applicants must possess a fair knowlledge of general geography such as may be obtained from a proper study of Frye's Advanced, Maury's Manual, Tarr and McMurry's Complete Geography or other standard text-books of equal grade. The following topics will be especially emphasized in the entrance examinations: Outlines and the positions of the continents, and location of the principal mountains, plateaus, river basins, and costal plains; influences of land forms and climate upon life and industries of the inhabitants; locations and outlines of important countries, particularly those of America and Europe, and of the states in the United States; locations of great cities in all conditions favorable to the growth of cities.

History. Applicants for the freshman class should have a fair knowledge of Thompson's United States History, or any other modern book of similar grade. The book should be mastered by careful study, with recitations and frequent reviews based upon the text. The relations between history and geography should be constantly kept in view by the study of maps in the text-book, by the use of an historical atlas and by any other available maps.

For the entrance requirements to the one year Agricultural Course see page elesewhere.

Entrance Examinations

Entrance Examinations are held during the first week of the opening session, September 12th to 14th, 1912, and all applicants for admission are expected to report promptly at the beginning of this period. Former students, also, who have conditions to remove or work to make up, are required to report at the same time.

Examinations on the subjects required for entrance will be held on the dates shown in the following schedules beginning at 9 a. m.

For Admission to the Freshman Class

Arithmetic—Thursday, September 12, 1912, at 9 a. m.
Algebra—Thursday, September 12, 1912, at 2 p. m.
English—Friday, September 13, 1912, at 9 a. m.
Geography—Friday, September 13, 1912, at 2 p. m.
History—Saturday, September 14, at 9 a. m.

For Admission to the Preparatory Class

Arithmetic—Thursday, September 12, 1912, 9 a. m.
English—Friday, September 13, 1912, at 9 a. m.
Geography—Saturday, September 14, 1912, at 9 a. m.

Applicants will be notified of the results of their examinations immediately after chapel services on Monday morning, September 16.

For Admission to Advanced Standing

For admission to advanced standing, applicants must be prepared to stand examinations on the subjects passed over by the lower classes, as indicated in the courses of study scheduled on the following pages. Such applicants should report with other new students during the regular examination period and arrange with their instructors for the necessary examinations before the opening of the session. Students admitted to advanced standing are allowed a reasonable length of time in which to make up shop work of the lower classes, in case they have not done equivalent work elsewhere.

Fees and Expenses

The regular fees for the session, not including tuition, are as follows:

Incidental fee	$ 5.00
Medical fee	5.00
Breakage fee	3.00
All uniforms	30.50
Board, washing, heat, light, etc.	90.00
Total	$133.50

These charges must be paid in quarterly installments as follows:

September 11, 1912	$66.00
November 13, 1912	22.50
January 22, 1913	22.50
April 2, 1913	22.50
Total	$133.50

Tuition students pay $10.00 per quarter additional. Free tuition is allowed only to South Carolina students.

Books, instruments, etc. can be purchased most economically at the Cadet Exchange at the following cost when new.

LIST OF TEXT-BOOKS AND MATERIAL THROUGH THE FRESHMAN CLASS	WHEN BOUGHT and PRICE	TERMS USED
PREPARATORY CLASS		
(All are bought First Term)		
The English Language, Book 2—Kinard and Withers	.55	1-2-3
School Studies in Words—Gilbert	.20	1-2-3
Fifth Reader—Hill	.60	-1-½
School History of the United States—White	.95	1-2-3
Advanced Arithmetic—Colaw and Elwood	.55	1-2-3
Algebra for Secondary Schools, Part 1—Wells	.68	1-2-3
New Complete Geography—Maury	88	1-2-3

FRESHMAN CLASS

(Engineering Course) First Term

	First Term	
(*) First Principles of Agriculture—Voorhees	.75	1-2-3
Text-book in Algebra—Wells	1.25	-1-
Lessons in English—Emerson and Lockwood	1.00	1-2-3
Practical Exercises in English—Buehler	.45	1-2-3
Sketch Book—Irving	.25	1-2-
Spelling Book—Benson and Glenn	.30	1-2-3
Academic Dictionary—Webster	1.35	1-2-3
South Carolina History—Weber	.60	½ of 1
Commercial Geography—Olin	1.00	½ of 1
Engineering Drawing—French	1.80	1-2-3
Drawing Board and Supplies	4.00	1-2-3
Drawing Instruments	$9.60 up	Four Yrs.
Forge Shop Hammer	.38	1-2-3

Second Term

	Second Term	
Plane and Solid Geometry—Durrell	1.20	-2-3
American Horticultural Manual—Budd and Hanson	1.35	2-3-
Essentials of Ancient History—Wolfson	1.35	-2-
Lady of the Lake—Scott	.35	-2-3

Third Term

	Third Term	
Essentials in Medieval and Modern History—Harding	1.35	-3-
Pen Art Portfolio—Zaner (Optional)	1.00	-3-

FRESHMAN CLASS

(Agricultural Courses) First Term

	First Term	
(*) First Principles of Agriculture—Voorhees	.75	1-2-3
Text-book in Algebra—Wells	1.25	-1-
Lessons in English—Emerson and Lockwood	1.00	1-2-3
Practical Exercises in English—Buehler	.45	1-2-3
Sketch Book—Irving	.25	1-2-
Spelling Book—Benson and Glenn	.30	1-2-3
Academic Dictionary—Webster	1.35	1-2-3
South Carolina History—Weber	.60	½ of 1
Commercial Geography—Olin	1.00	½ of 1
Mechanical Drawing—Anthony	1.40	1-2-3
Drawing Board and Supplies	3.50	1-2-3
Drawing Instruments	5.50 up	1-2-3
Forge Shop Hammer	.38	1-2-3

Second Term

	Second Term	
Plane and Solid Geometry—Durrell	1.20	2-3-
American Horticultural Manual—Budd and Hanson	1.35	2-3-
Essentials of Ancient History—Wolfson	1.35	2- -
Lady of the Lake—Scott	.35	2-3-

Third Term

	Third Term	
Essentials of Medieval and Modern History—Harding	1.35	3- -

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[*]The price of this book will be slightly increased.

Note: The numerals 1, 2, and 3 under the column headed "Terms Used" indicate the first, second or third term.

Each student is required to have his own text-books, except in the case of brothers in the same class and course rooming together.

New Students are required to purchase 2 mattress covers @ $1.00 each, $2.00; 2 clothes bags @ 25c. each, 50c. These are regulation articles and are secured only at the Cadet Exchange. They will last for the entire course of four years and can often be bought second hand at less than the above figures.

Each student must bring with him four sheets, two blankets, one comfort, six towels, two pillow cases and one pillow. All beds are single width.

Students are advised to provide themselves with a rain coat and a pair of rubber shoes.

A fee of $2.00 is charged for a diploma, payable before graduation.

Settlement of College Fees

Remittances should be made in cash, by money order, New York exchange, or by local check, made payable to Dr. P. H. E. Sloan, Treasurer, Clemson College.

Breakage

The breakage fee of $3.00 is a deposit to cover damage or destruction of college property when individual responsibility can not be located. Any amount remaining to the credit of a student at the end of the session will be refunded. A student will be required to pay directly to the Treasurer for any damage done to college property for which he is personally responsible. The occupants of a room will be held responsible for any damage to property in the room.

Rules Governing Refunds to Students

Refunds will be made to students under the following rules:

1. Out of the amount deposited for uniforms, a refund will be made for any garments that are accepted by the Commandant as serviceable. Parents will be notified of the amount refunded under this rule.

2. The refund for board, laundry, heat, light and water

will be at the rate of $10.00 per month. No refund will be made for interruptions of less than one month.

3. A refund of all moneys, except 25c. per day for board, will be made to any student who leaves College within ten days of the date of his matriculation.

4. Any balance of the $3.00 breakage fee at the end of the session will be sent to parents after the close of the session in June.

5. No refunds of medical or incidental fees will be made unless a student withdraws within ten days after date of matriculation.

6. No refund of the quarterly tuition payment of $10.00 will be made unless the student withdraws from College within ten days of the beginning of the quarter in which the fee is paid.

Optional Expenses

The expenses above listed are all that is required by the College. For the information of parents the following list of regular optional expenses connected with student activities is given:

Subscription to the "Chronicle"	$1.00
Subscription to the "Tiger"	1.00
Subscription to the "Annual"	2.50
Membership fee in the Literary Societies for new members	$2.00-3.00
Membership fee in the Literary Societies for old members each year	1.00
Lyceum ticket	1.00
Membership fee Y. M. C. A.	2.00
Extra attractions such as "Glee Club," "Coburn Players," etc.	1.50
All athletic contests such as Track Meets, Base Ball and Foot Ball	$3.00-$5.00
Dues and fees for a student belonging to a class dancing club and either the German or Cotillion Club will be approximately	$20.00-$25.00

Free Tuition

AN ACT to Require the Authorities of all Institutions of Learning Supported or Controlled in Whole or in Part by the State, to Report to the General Assembly the Names of All Students at Such Institutions and Whether They are Pay, Beneficiary or Scholarship Students; and to Require the Auditors of All the Counties to Keep a Record and File of all Affidavits of Inability to Pay Tuition Made Before Them, as Now Required by Law.

Section 1. Be it enacted by the General Assembly of the State of South Carolina, That from and after the approval of this Act, the authorities of all colleges or institutions of learning supported in whole or in part by the State, shall report to the General Assembly at its annual meeting the names of all students, with the post office address of each and whether such students are pay, beneficiary or scholarship students.

Section 2. That the Auditors of the several Counties of this State be required to keep a record and file of all affidavits made before them, as now required by law, of inability on the part of the parent, guardian or trustee to pay tuition.

Section 3. That all Acts and parts of Acts inconsistent with this Act be, and the same are hereby, repealed.

Approved the 24th day of February, A. D., 1906.

In accordance with this law, residents of South Carolina are granted free tuition upon presentation of a certificate, signed by father or guardian and the County Auditor.

Certificate blanks will be furnished upon application to the President.

SCHOLARSHIPS

Statement of the State Laws and College Rules Governing the Award of Four-Year Scholarships

1. Each county is allowed as many scholarships as it has representatives in the General Assembly. The total number for the State is one hundred and sixty-eight. The num-

ber of vacancies in any particular county can be learned by making inquiry of the President of Clemson College.

2. Scholarship students are required to take one of the Agricultural Courses, except that one scholarship per county is allowed in the Textile Course. Scholarship students are not permitted to take the Engineering Courses.

3. Each scholarship pays $100.00 per session in cash, and allows free tuition, worth $40.00 more. The regular scholarship is good for four consecutive years, unless terminated by the student's failure to maintain himself in his classes, and comply with the rules of the College.

4. The scholarships are awarded on competitive examinations. The examinations are conducted by the County Superintendents of Education at the county seats, on the second Friday in July, from 9 A. M. to 4 P. M.

5. The examination questions are prepared, and the papers are graded, by the Clemson faculty. This faculty reports the winners by number to the State Board of Education, and the State Board makes the award in conformity to the above recommendations.

6. The examinations are on the common school branches. An applicant must meet the entrance requirements of the freshman class to pass.

7. The College has a right to reject any applicant, who in respect to age (16 years at the time of entering), examination papers, or in any other respect, fails to meet its requirements for admission.

8. The following are not eligible for scholarship appointments:

(a) A person who during the current year has won or holds a scholarship at another State institution.

(b) A person who has been in attendance at Clemson College or "any other institution of higher learning known as a College or University," provided however, that this condition shall not apply if there are no other eligible applicants for the scholarship.

(c) A person who has forfeited a scholarship at Clemson College or any other State institution by failure to maintain himself.

9. No applicant shall be debarred from standing the examinations because he has failed to fill out the necessary certificate of financial inability as required by law, but this certificate must be in the hands of the President of Clemson College before the applicant can be considered eligible for a scholarship. (The blank certificate form can be obtained at any time from the President of Clemson College, or from the County Superintendent of Education on the day of the examinations.) It must reach the President not later than noon of August 1st, otherwise the applicant will be eliminated from the competition.

10. If a scholarship vacancy shall occur, and the county to which it belongs has no eligible applicant, the Clemson faculty may fill the vacancy by awarding the scholarship to some eligible applicant from another county. However, any such appointment shall last not longer than one session.

Note.—Scholarship students will therefore have to deposit $33.50 with the Treasurer at the beginning of the session.

Distribution of Scholarships

The one hundred and sixty-eight four-year scholarships provided in this institution by the Legislature are apportioned to the counties of the State according to law as follows:

Abbeville	4	Clarendon	4
Aiken	4	Colleton	3
Anderson	7	Darlington	4
Bamberg	3	Dillon	3
Barnwell	4	Dorchester	2
Beaufort	3	Edgefield	3
Berkeley	3	Fairfield	3
Calhoun	2	Florence	4
Charleston	9	Georgetown	3
Cherokee	3	Greenville	7
Chester	3	Greenwood	4
Chesterfield	3	Hampton	2

Horry	3	Oconee	3
Jasper	1 *	Orangeburg	6
Kershaw	3	Pickens	3
Lancaster	3	Richland	6
Laurens	4	Saluda	3
Lee	3	Sumter	4
Lexington	4	Spartanburg	8
Marlboro	4	Union	3
Marion	3	Williamsburg	4
Newberry	4	York	5

ONE YEAR AGRICULTURAL SCHOLARSHIPS

One scholarship is allotted to each county and seven to the state at large. The holders of these scholarships are expected to take the one year agricultural course given at Clemson College. See inscription of course elsewhere.

Each scholarship pays $100 in cash per session and allows free tuition worth $40 more. These scholarships are good for one year provided, the student maintains himself in his classes and complies with the rules of the college.

The scholarships are awarded as prizes for meritorious agricultural achievement under the following conditions: The County Executive Committee or other governing board for the most representative and well organized agricultural society or organization of farmers in each county, as determined by the Board of Trustees of Clemson College, shall recommend to the President of Clemson College not later than July 1st, in order of merit, three or more young men who have done creditable work of an agricultural nature. A full statement of the work done by each shall also be given.

In case there is no county organization of farmers, the Director of the Agricultural Department of Clemson College shall ask for recommendations from three or more representative farmers in the county, and from these recommendations he will prepare a list of three or more names to present to the President. When the President receives the recommenda-

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* Jasper county will be entitled to two scholarships when act 245 of the statutes of 1910 is amended by the Legislature.

tions, he will notify the young men who have been recommended. These young men will stand a competitive examination at the county seat the second Friday in July.

A certificate of financial inability is not required.

The award of the seven scholarships from the state at large are made in the same way as for the county scholarships except that the Executive Committee or governing board of the most representative organization of farmers in the state, instead of in the county, shall make the recommendations.

The college has a right to reject any young man, who in respect to age (18 years at the time of entrance), examination papers or in any other respect fails to meet its entrance requirements for admission.

The holders of these scholarships are required to make a deposit of $17.55 with the treasurer at the beginning of the session. See a full description of the one-year agricultural course and costs as given elsewhere.

The Southern Railway Scholarship

The Southern Railway will give to a young man, living in a county traversed by its lines (including the Blue Ridge Railway), an agricultural scholarship which will pay about $200.00 per year.

This scholarship will be awarded by competitive examination.

Write to Mr. M. V. Richards, Land and Industrial Agent, Southern Railway, Washington, D. C. for full information, or to the President, Clemson College, S. C.

Grades and Reports

Reports of class standing and discipline are sent to the parents at intervals of approximately one and one half months throughout the session. During 1912-1913 these reports will be made up for periods ending on the following dates, and will usually be mailed to parents about one week later **October 25, December 13, and December 20*, 1912; February 7 and March 21*, 1913; April 25 and June 6*, 1913.**

Dates marked with an asterisk are approximate, depending upon the time that the term examinations end. The grades sent out on these three dates are a combination of the examination grade with the average grade of two months.

Examinations are held at the close of each term, and reports are sent to parents, giving the results of these examinations and also the averages of monthly grades in all subjects pursued by the student. The student must attain at least the pass-mark, 60 per cent. on both examination grade and term average in each term separately and in every subject in his course, in order to be entitled to promotion to the next higher class.

Rules for Re-examination and Promotion

1. No re-examination shall be granted to a student in a subject in which he has made a class mark of less than 60 per cent. for the term, or an examination mark of less than 40 per cent.

No student shall be allowed re-examination who makes less than 60 per cent. on more than three term examinations during the session, or more than two examinations for one term, provided that if all three failures are in the same subject, he may be allowed re-examination in one additional subject for one term.

2. A student who fails on re-examination or term class mark shall be required to take that work over with the class, and schedule it first.

3. A student, who for any reason, fails to take his re-examination at the scheduled time, shall not be allowed to take the examination except by permission of the general faculty.

4. All re-examinations, except for seniors, shall be held during the first five days of the session, provided however, that if a student has missed all term examinations on account of sickness he may be granted re-examinations at special times suitable to the faculty and to the instructors concerned.

5. Students who are granted special privileges to make up work shall be required to report at the next scheduled period after the privilege is granted, and a list of such delinquents shall be furnished each instructor concerned, and deficient subjects in the lower class shall be made up first.

6. A failure in practical work shall have the same weight as a failure in a theoretical subject.

7. A student below the junior class shall not be granted an irregular course.

8. A student taking the class over forfeits all previous records in that class.

9. No student shall take over a class more than once.

10. Each student shall be required to make up all deficiencies before he is given permission to change his course, or he must take these deficient subjects along with his new course, and he shall be classed as a conditioned student until these deficiencies are removed.

11. No student shall be promoted from one class to another who has a failure in more than one subject for the preceding year, and a student who is promoted with work behind shall be classed as a conditioned student, and shall be required to schedule first the subjects on which he is deficient.

12. No student who has work to make up shall be promoted to the senior class.

PRESCRIBED COURSES OF STUDY

The college offers the following eight regular courses of study, each leading to the degree of Bachelor of Science (B. S.), the course pursued being designated on the diploma:

I. AGRICULTURE
II. AGRICULTURE AND ANIMAL INDUSTRY
III. AGRICULTURE AND CHEMISTRY
IV. CHEMISTRY
V. MECHANICAL AND ELECTRICAL ENGINEERING
VI. CIVIL ENGINEERING
VII. TEXTILE INDUSTRY
VIII. ARCHITECTURAL ENGINEERING

The three agricultural courses are identical during the freshman and sophomore years and at the beginning of the junior year opportunity is given the student to specialize in one of several agricultural lines. The other five courses are similar during the first two years and at the beginning of the junior year differentiate into the civil engineering, the electrical and mechanical engineering, the chemistry, the textile, and the architectural engineering courses.

In addition to these courses, special shorter courses are offered in the Agricultural, the Engineering and the Textile departments, but these do not lead to any degree.

Course I. Agriculture

This is a course in general agriculture supplemented by work in mathematics, English, political economy, history and the natural sciences. Its object is to give a broad, thorough education at the same time the student is being carefully instructed in the various branches of agriculture, so that he can become a successful farmer or a specialist in some line of farm industry. (So that he will be prepared to take up farming, gardening, or fruit growing as an occupation, or to further pursue investigational work in the United States Department of Agriculture or one of the various State Experiment Stations.)

COURSE I. AGRICULTURE

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term	PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (271)	3	2	2
English (501)	5	5	5	Freehand Drawing (240)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (243)	2	2	2
Agriculture (100)	2	2	2	Forge Work (252)	3	2	2
				Botany (171)	0	2	2
				Bookkeeping (540)	2	2	2
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522)	5	0	0	Chemistry (301)	3	3	3
English (502)	3	3	3	Civil Engineering (231)	0	2	2
Chemistry (300)	3	3	3	Zoology & Entomology (140)	2	3	3
Agriculture (101)	0	0	2	Botany (172)	4	4	0
Physics (530)	2	3	3	Agriculture (101)	0	0	4
Civil Engineering (231)	0	2	2	Physiography (117)	3	0	0
Zoology & Entomology (140)	1	3	2	Military Drill (602)	3	3	3
Botany (172)	1	1	0				

Junior Class

English (503)	2	2	2	Chemical Lab. (303, 305)	3	3	3
History (514)	2	2	2	Horticulture (121-122)	2	0	2
Chemistry (304)	2	2	2	Agriculture (102-106)	0	2	4
Horticulture (121-122)	2	0	2	Dairying (162)	3	3	0
Animal Husbandry (150-152)	0	2	2	Forestry (175)	2	0	0
Dairying (161)	2	2	0	Animal Husbandry (154)	0	0	3
Agriculture (102)	0	2	2	Veterinary Science (133)	0	4	0
Veterinary Science (130-131)	2	2	2	Entomology (142)	2	0	0
Forestry (175)	2	0	0	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

Political Economy (515)	3	2*	0	Agriculture (103-105)	4	4	3
English (504)	0	2*	3	Horticulture (123-124-125)	2	2	2
Agriculture (103-105)	3	3	2	Animal Husbandry (160)	2	3	2
Animal Husbandry (157, 153)	2	2	2	Bacteriology (177)	0	3	3
Horticulture (123-124-125)	2	2	3	Botany (176)	4	0	0
Geology (112)	2	3	2	Entomology (143)	0	0	2
Botany (176)	2	0	0	Military Drill (602)	3	3	3
Bacteriology (177)	0	2	2				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

Course II. Agriculture and Animal Industry

This is a differentiation of the original Course in Agriculture for the purpose of affording students interested in general animal industry, dairying and veterinary medicine an opportunity to receive more instruction in these lines than was formerly practicable. There is a growing interest in animal industry throughout the State, and this course is intended to meet the demand for more specialized training in this phase of agriculture. In order to afford more time for instruction in these branches, some important, but less essential, studies have been omitted. English, history and civics are retained throughout the course. Drawing the first year, physics the second year, geology the last year, and chemistry the last three years, have been adapted to meet the demands of this new course. Botany, bacteriology, zoology and entomology begin the first year of the course in order to give a clearer knowledge of farm crops, live stock, dairying, sanitation and animal disease. General agriculture is taught during the first two years, horticulture the third year and veterinary medicine the last three years; while live stock and dairying are taught throughout the course. The live stock work embraces the study of the breeds of horses, cattle, sheep, hogs and poultry, and includes judging, breeding, feeding and care and management of flocks and herds. In the dairy course the production, handling, manufacture and marketing of whole milk, cream, ice cream, butter, and cheese are considered.

COURSE II. AGRICULTURE AND ANIMAL INDUSTRY

Freshman Class

	Hours per week				Hours per week		
THEORETICAL	1st Term	2nd Term	3rd Term	PRACTICAL	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (271)	3	2	2
English (501)	5	5	5	Freehand Drawing (240)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (243)	2	2	2
Agriculture (100)	2	2	2	Forge Work (252)	3	2	2
				Botany (171)	0	2	2
				Bookkeeping (540)	2	2	2
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522)	5	0	0	Chemistry (301)	3	3	3
English (502)	3	3	3	Civil Engineering (231)	0	2	2
Chemistry (300)	3	3	3	Zoology & Entomology (140)	2	3	3
Agriculture (101)	0	0	2	Botany (172)	4	4	0
Physics (530)	2	3	3	Agriculture (101)	0	0	4
Civil Engineering (231)	0	2	2	Physiography (117)	3	0	0
Zoology & Entomology (140)	1	3	2	Military Drill (602)	3	3	3
Botany (121-122)	1	1	0				

Junior Class

English (503)	2	2	2	Chemical Lab. (3[illegible] 305)	2	3	3
History (514)	2	2	2	Horticulture (121-122)	2	0	2
Chemistry (304)	2	2	2	Agriculture (102-103)	0	2	4
Animal Husbandry (150, 152)	0	2	2	Dairying (162)	3	3	0
Dairying (161)	2	2	0	Forestry (173, 175)	2	0	0
Agriculture (102)	0	2	2	Animal Husbandry (154)	0	0	3
Veterinary Science (130-131)	2	2	2	Entomology (142)	2	0	0
Forestry (175)	2	0	0	Veterinary Science (133)	0	4	0
Horticulture (121-122)	2	0	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

Political Economy (515)	3	2*	0	Animal Husbandry (160)	3	2	2
English (504)	0	2*	3	Veterinary Science (136)	3	3	3
Animal Husbandry (157,155,153)	4	2	2	Bacteriology (177)	0	3	4
Veterinary Science (134-135)	2	2	3	Dairying (162)	2	0	0
Geology (112)	2	3	2	Agriculture (103, 105)	4	4	3
Agriculture (103-104-105)	3	3	2	Military Drill (602)	3	3	3
Bacteriology (177)	0	2	2				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

Course III. Agriculture and Chemistry

This is a differentiation of the original course in Agriculture for the purpose of affording students interested in chemistry, mineralogy and bacteriology an opportunity to receive more instruction in these subjects than is offered by the other agricultural courses. There is a growing demand for well-trained chemists, and the student who proposes to select the profession of chemistry will find this course designed to give him a good foundation in that science in addition to training in general agriculture.

COURSE III. AGRICULTURE AND CHEMISTRY

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5
English (501)	5	5	5
History (511-513)	3	3	3
Agriculture (101)	2	2	2

PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Wood Work (271)	3	2	2
Freehand Drawing (240)	2	2	2
Mechanical Drawing (243)	2	2	2
Forge Work (252)	3	2	2
Botany (171)	0	2	2
Bookkeeping (540)	2	2	2
Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522)	5	0	0
English (502)	3	3	3
Chemistry (300)	3	3	3
Agriculture (101)	0	0	2
Physics (530)	2	3	3
Civil Engineering (231)	0	2	2
Zoology & Entomology (140)	1	3	2
Botany (172)	1	1	0

Chemistry (301)	3	3	3
Civil Engineering (231)	0	2	2
Zoology & Entomology (140)	2	3	3
Botany (172)	4	4	0
Agriculture (101)	0	0	4
Physiography (117)	3	0	0
Military Drill (602)	3	3	3

Junior Class

English (503)	2	2	2
History (514)	2	2	2
Chemistry (304)	2	2	2
Mineralogy (111)	2	2	2
Botany (172)	2	0	0
Horticulture (121-122)	2	0	2
Agriculture (102)	0	2	2
Dairying (161)	2	2	0
Animal Husbandry (150-152)	0	2	2
Forestry (175)	2	0	0
Military Science (600)	1	1	1

Chemistry (303)	6	6	6
Mineralogy (111)	0	2	2
Forestry (175)	2	0	0
Agriculture (102-106)	0	2	4
Agriculture (102)	0	2	2
Dairying (162)	0	2	0
Entomology (142)	2	0	0
Military Drill (602)	3	3	3

Senior Class

Political Economy (515)	3	2*	0
English (504)	0	2*	3
Chemistry (302)	2	2	2
Horticulture (123-125)	2	0	3
Agriculture (103-105)	3	3	0
Geology (112)	2	3	2
Bacteriology (177)	0	2	2
Botany (176)	2	0	0
Animal Husbandry (157, 153)	0	2	2
Military Science (601)	1	1	1

Chemical Lab. (305)	6	6	6
Horticulture (123-125)	2	0	3
Bacteriology (177)	0	3	3
Animal Husbandry (160)	0	3	0
Botany (176)	4	0	0
Military Drill (602)	3	3	3

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*Political Economy ends and Senior English begins at middle of second term.

Course IV Chemistry

This course is intended to prepare the student for engaging in manufacturing operations involving chemistry, or for employment as chemist in commercial or fertilizer inspection laboratories, and in Experiment Station or U. S. Government service. A student completing this course satisfactorily will also be well equipped to undertake advanced work in chemistry and to teach the subject.

The first year of the course is the same as in Course III, Agriculture and Chemistry. Beginning in the sophomore year, and continuing throughout this course, increasing stress is laid upon chemistry, until in the senior year all the practical work, with the exception of military drill, is devoted to analytical chemistry. With the above stated end in view the student will be given an opportunity to become familiar with many methods of analysis commonly used in commercial and general laboratory work. He will be permitted and encouraged to undertake as many such methods as he can perform without interfering with that indispensable fundamental instruction necessary for every properly trained analytical chemist.

The student is well grounded in English, German, mathematics, physics, mineralogy, chemical geology and chemistry, the emphasis is being given to chemistry, especially during the last two years. German has been introduced into this course because a reading knowledge of this language is almost indispensable to the student who wishes to undertake advanced work in chemistry, or to stand examinations for positions in the U. S. Government service.

COURSE IV. CHEMISTRY

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term	PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	2	2
English (501)	5	5	5	Freehand Drawing (240)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (243)	2	2	2
Agriculture (100)	2	2	2	Forge Work (252)	3	2	2
				Botany (171)	0	2	2
				Bookkeeping (540)	2	2	2
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Chemistry (301)	4	4	4
English (503)	3	3	3	Chemistry (307)	2	3	3
History (514)	2	2	2	Bacteriology (177)	0	3	3
Chemistry (300)	3	3	3	Mechanical Drawing (244)	2	2	2
Physics (531)	2	2	2	Botany (172)	4	0	0
Bacteriology (177)	0	2	2	Military Drill (602)	3	3	3

Junior Class

Mathematics (525, 527)	4	4	0	Assaying (303)	2	0	0
English (503)	2	2	2	Organic Chemistry (308)	0	2	2
Chemistry (304)	2	2	2	Chemical Lab. (303)	6	6	6
Chemistry (306)	2	2	2	Physical Lab. (533)	2	2	2
Physics (532)	2	2	2	Mineralogical Lab. (111)	2	2	2
German (550)	0	0	4	Military Drill (602)	3	3	3
Mineralogy (111)	2	2	2				
Military Science (600)	1	1	1				

Senior Class

English (504)	0	2*	3	Chemical Lab. (305, 311)	12	12	12
Political Economy (515)	3	2*	0	Military Drill (603)	3	3	3
Chemistry (302)	2	2	2				
Chemistry (309)	2	1	2				
Metallurgy (310)	2	2	2				
Chemical Geology (114)	3	3	3				
German (550-551)	2	2	2				
Military Science (601)	**1**	**1**	**1**				

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*Political Economy ends and Senior English begins at middle of second term.

Course V. Mechanical and Electrical Engineering

This course is designed to fit young men for positions in the various departments of these professions. It attempts, by practical and theoretical instruction, to lay a solid scientific foundation upon which the student may build rapidly after graduation. The experience necessary to make a successful engineer can not be acquired in a college course, but the technical graduate usually distances his uneducated competitors in the acquirement of practical knowledge and experience.

Within the department are taught mechanics, and mechanical and electrical engineering. Along with the theoretical instruction in these subjects, practice is given in well equipped laboratories.

Shop instruction is given in carpentry, turning, and pattern-making; in moulding; chipping and filing, and the use of machine tools. The purpose of this instruction is not to turn out skilled artisians, but to train those faculties of mind which can best be reached through the work of the hand.

The work in drawing is made one of the features of the course.

COURSE V. MECHANICAL AND ELECTRICAL ENGINEERING

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term	PRACTICAL	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (100)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244)	2	2	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	3	2	2
Physics (531)	2	2	2	Descriptive Geometry (230)	3	0	0
Civil Engineering (231)	0	2	2	Civil Engineering (231)	0	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Mechanical Drawing (245)	3	3	3
English (503)	2	2	2	Machine Shop (260)	3	3	3
Physics (532)	2	2	2	Physical Lab. (533)	3	3	0
Electrical Eng. (200)	3	3	3	Electrical Lab. (201)	3	3	3
Mechanism (210)	2	0	0	Mineralogical Lab. (111)	0	0	3
Mechanics (211)	0	2	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

English (504)	0	2*	3	Machine Shop (261)	3	3	0
Political Economy (515)	3	2*	0	Drawing & Designing (238)	3	3	3
Electrical Eng. (202)	5	5	5	Electrical Lab. (203)	3	3	3
Mechanical Eng. (213)	3	3	5	Mechanical Lab. (214)	3	3	6
Mechanics (212)	2	2	0	Military Drill (602)	3	3	3
Geology (113)	1	2	1				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

Course VI. Civil Engineering

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics, and the physical sciences. The course will also be found to embrace about the same amount of drawing, shop work, mechanical engineering and mechanical laboratory practice as the other engineering course.

The distinctive work pursued by students in this course includes the study of land surveying and plotting, topographic surveying and mapping; location, construction, and maintenance of roads, railroads, streets, and pavements;; strength of materials, masonry construction, foundations on land and in water; analytic and graphic investigations of stresses in girders, roofs and bridges, and the design of these structures; the principles of hydraulics as applied to dams, reservoirs, canals, municipal water-works, and the development of water power.

COURSE VI. IN CIVIL ENGINEERING

Freshman Class

THEORETICAL	Hours per week 1st Term	2nd Term	3rd Term	PRACTICAL**	Hours per week 1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244a)	2	2	2
Chemistry (300)	3	3	3	Chemical Lab. (301)	3	2	2
Physics (531)	2	2	2	Civil Engineering (231)	0	2	2
Civil Engineering (231)	0	2	2	Descriptive Geom. (230)	3	0	0
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Mechanical Drawing (246)	3	3	3
English (503)	2	2	2	Machine Shop (260)	3	3	3
Physics (532)	2	2	2	Physical Lab. (533)	3	3	0
Civil Engineering (232-233)	3	3	3	Mineralogical Lab (110)	0	0	3
Mechanism (210)	2	0	0	Civil Eng. Field (232-233)	3	3	3
Mechanics (211)	0	2	2	Military Drill (602)	3	3	3
Military Science (600)	1	1	1				

Senior Class

English (504)	0	2*	3	Machine Shop (261)	3	3	0
Political Economy (515)	3	2*	0	Drawing & Designing (219)	3	3	3
Civil Engineering (235)	5	5	5	Mechanical Lab. (211)	3	3	3
Mechanical Eng. (213)	3	3	5	Civil Eng. Field (236-238)	3	3	6
Mechanics (212)	2	2	0	Military Drill (602)	3	3	3
Geology (113)	1	2	1				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

Course VII. Textile Industry

The course in Textile Industry is designed to give the student sound training, both theoretical and practical, in the sciences upon which manufacturing processes are based. The curriculum of the course recognizes that in a profession of so many aspects a broad general cultivation, a liberal training in design, and a thorough knowledge of the underlying principles are necessary for its successful practice.

The first two years are taken up with a broad general training along scientific and mechanical lines, while from the beginning of the junior year the work takes on a distinctly professional character. The practical work is carried on for the purpose of developing in the student habits of accurate observation, and of bringing to his consideration not only methods of fundamental importance, but also the questions of economy of time, precision of results, and attention to details.

This course does not presume to fit one for the management of a mill, but the graduate is in possession of such information, and has acquired such experience and knowledge that he may look forward to a successful career as manufacturer, mill architect, or technical chemist, provided he has the necessary energy, application and tact, and a willingness to begin at the bottom.

COURSE VII. TEXTILE INDUSTRY

Freshman Class

	Hours per week				Hours per week		
THEORETICAL	1st Term	2nd Term	3rd Term	PRACTICAL	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	3
English (502)	3	3	3	Pattern Making (272)	2	3	3
History (514)	2	2	2	Mechanical Drawing (244)	2	2	2
Chemistry (300)	3	3	3	Chemical Lab. (301)	3	2	2
Physics (531)	2	2	2	Descriptive Geometry (230)	3	0	0
Civil Engineering (231)	0	2	2	Civil Engineering (231)	0	2	2
				Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Machine Shop (260)	3	3	3
English (503)	2	2	2	Chem. Lab. (303)	3	3	0
Designing (412)	2	2	2	Dyeing Lab. (420)	0	0	3
Carding and Spin'g (400-406)	2	2	1	Weaving (410-411)	3	3	3
Mechanism (210)	2	0	0	Carding and Spin'g (400-406)	3	3	3
Mechanics (211)	0	2	2	Military Drill (602)	3	3	3
Textile Chemistry (420)	1	1	2				
Military Science (600)	1	1	1				

Senior Class

English (504)	0	2*	3	Mechanical Lab. (215)	0	3	3
Political Economy (515)	3	2*	0	Carding & Spinning, (400, 406)	5	3	3
Mechanical Eng. (213)	3	3	0	Dyeing Lab. (421)	3	3	3
Carding and Spin'g (407-409)	2	2	2	Weaving (410-411)	4	3	3
Textile Chemistry (421)	2	2	2	Military Drill (602)	3	3	3
Designing (412)	2	2	2				
Cloth Analysis (414)	1	2	2				
Weaving (410-411)	1	1	1				
Jacquard Designing (413)	0	0	2				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

Course VIII. Architectural Engineering

This course is established to comply with an increasing demand in the South for men trained in architectural design, building construction, and allied subjects. The course as planned covers a period of four years' study, of which, the first two are devoted to technical subjects similar to the other engineering courses, except that drawing, and more especially descriptive geometry, are strongly emphasized in their special application to architectural drawing and rendering. It is recognized that architecture must be treated as an art, as well as a science, and as drawing and design are the most essential elements in an architect's professional work, the greatest possible amount of time is given to them in the junior and senior years. Throughout the entire course, special attention is paid to the engineering branch of the architect's profession. A thorough study is made of the materials used in construction. Analytic and graphic investigations of stresses in girders, roofs, etc., are made in detail. The various systems of heating and lighting are also studied.

The successful architect must have, not only a thorough knowledge of design and building construction, but also a broad sympathy with all intellectual culture. In order to obtain this, the student is encouraged to read literature, history, and science.

COURSE VIII. ARCHITECTURAL ENGINERING

Freshman Class

	Hours per week				Hours per week		
THEORETICAL	1st Term	2nd Term	3rd Term	PRACTICAL	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Wood Work (270)	3	3	3
English (501)	5	5	5	Freehand Drawing (240)	3	3	3
History (511-513)	3	3	3	Mechanical Drawing (242)	3	3	3
Agriculture (101)	2	2	2	Forge Work (250)	3	3	3
				Military Drill (602)	3	3	3

Sophomore Class

Mathematics (522-4-5)	5	3	3	Foundry (251)	2	3	0
English (502)	3	3	3	Freehand Drawing (280)	2	3	3
History (514)	2	2	2	Arch. Drawing (281)	2	2	3
Chemistry (300)	3	3	3	Chemical Lab. (301)	3	2	2
Physics (531)	2	2	2	Des. Geometry (230, 230a)	3	2	4
Des. Geometry (230a)	0	2	2	Military Drill (602)	3	3	3

Junior Class

Mathematics (525-527)	5	5	5	Architectural Design (282)	6	6	6
English (503)	2	2	2	Freehand Drawing (282a)	0	3	3
Physics (532)	2	2	2	Civil Eng. (F) (234)	3	0	0
Civil. Eng. (234)	3	0	0	Mineralogical Lab. (110)	0	0	3
Architectural Eng. [204-212-284]	2	5	5	Physical Lab. (533)	3	3	0
Military Science (600)	1	1	1	Military Drill (602)	3	3	3

Senior Class

English (504)	0	2*	3	Architectural Design (286)	9	9	12
Political Economy (515)	3	2*	0	Testing Lab. (216)	3	3	0
History of Arch. (283)	2	2	2	Military Drill (602)	3	3	3
Geology (113)	1	2	1				
Building Constr. (284)	2	2	2				
Arch. Eng. (288)	5	2	3				
Heat and Sanitation (284a)	0	3	2				
Professional Practice (285)	1	1	1				
Military Science (601)	1	1	1				

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*Political Economy ends and Senior English begins at middle of second term.

SHORT COURSES

Special Courses

Besides students in the regular undergraduate courses, there may be farmers and others of mature age, including graduates of other institutions, who desire to avail themselves of the special privileges offered by the College. To such persons the opportunity is offered, under the advice of the director of the department in which work is contemplated, to pursue special lines of study or investigation in any of the subjects taught in the College, provided attention can be given to them without detriment to the regular classes. Such special students will be admitted after they have satisfied the director of the department that they are qualified to pursue the work with profit.

Special students are excused from military duty, but are subject to the general regulations of the College requiring good conduct and diligent prosecution of course selected. They are not admitted to barracks, but rooms and board may be secured in the community at reasonable rates. They will be required to pay the usual fees, except the price of uniform and board in barracks.

Special Post Graduate Textile Course

This course is, in general, a continuation of the regular course with the addition of such subjects as will lead to a proper understanding of industrial affairs. Frequent discussion of the subjects treated, and wide reading on assigned topics will be special features of the course. The subjects taken up will include combing, mule spinning, mill construction and organization, assembling of machinery, Jacquard weaving, building of Jacquard harnesses, loom fixing, designing, dyeing, manufacture and technical analysis of chemicals and other products used in the textile industry; and sociology in so far as it touches upon mill life, welfare work and labor problems.

Special Cotton Grading Course

This course begins with the winter term, January 3, 1913, and continues for four weeks. All of the important cottons of the world are studied, but most of the practice is with the varieties grown in the United States, and especially those grown in South Carolina. Constant practice is given with a full line of samples—including the tinges and stains. A set of arbitration samples is used for reference and comparison. The physical properties of the fibre are studied with a microscope, and its diameter, length, strength and other spinning qualities determined. The students are given the results of experiments made by the textile students with various grades.

Textile Short Course

To meet the demands of southern conditions for a class of young men trained in the finer details of cotton manufacture, a special two-year course has been arranged to accommodate a limited number of students who may not be in a position to take the regular four-year textile course.

The course includes mathematics (beginning algebra), English, freehand and mechanical drawing, carding, spinning, weaving and designing, is thoroughly practical and allows the greater portion of the student's time to be devoted to the study of textiles in its several branches.

To pursue his course successfully the student must be well grounded in arithmetic, and should be capable of expressing his thoughts clearly in writing. The student seeking admission to this course must present himself at the College during the regular entrance examination period, September 12 to 14, 1912, and satisfy his instructors that he is prepared to undertake the work. No student will be admitted after that time. Students must be at least 18 years of age, and must have had at least one year's experience in some cotton mill. Students who have failed in the regular College courses will not be allowed to change to this course. No diploma is conferred upon the completion of this work, but the student receives a certificate showing that he has finished the course.

COURSE OF STUDY

Special Textile Course

First Year

	Hours Per Week		
	1st term	2nd term	3rd term
Mathematics (begins algebra)	5	5	5
Freshman English	5	5	5
Carding and Spinning (theory)	2	2	2
Carding and Spinning (practical)	3	3	3
Mechanical Drawing	3	3	3
Designing	3	3	3
Weaving	6	6	6
Freehand Drawing	3	3	3
	30	30	30

Second Year

	1st term	2nd term	3rd term
Mathematics (complete geometry)	5	0	0
Sophomore English	3	3	3
Chemistry	3	3	3
Carding and Spinning (theory)	2	2	2
Carding and Spinning (practical)	6	6	6
Chemical Laboratory	2	2	2
Designing	2	3	3
Cloth Analysis and Jacquard Designing	2	3	3
Weaving	5	8	8
	30	30	30

FARMER'S SHORT COURSE IN AGRICULTURE

Four Weeks Course

It is an established fact that a farm can no longer be run successfully in the old-time haphazard fashion. Science and brains skillfully applied to farming so increase the yield and improve its quality as to make some knowledge of the underlying principles of scientific farming essential to the successful farmer of today. While it is realized that the four years course is none too long to give a boy the foundation which will insure success in farming, it is clearly seen that there are many practical farmers who have neither the time nor the means to devote four years to a college course, who would be greatly benefited by a few weeks spent at the college. To meet such a demand the college offers a short course of four weeks during the month of January. Much helpful information will be given as to recent improvements in machinery and methods. Agronomy, including plant growth, soil, fertilizers, tillage, implements and farm crops; Animal Husbandry, including breeds of animals, breeding, feeding, care of animals and stock judging; together with some work in Horticulture, Dairying, Veterinary Science and Entomology, will comprise the course. Opportunity for special work in dairying, horticulture, or cotton grading, will be given to any desiring it.

Write to the Registrar for detailed information.

Work-Boy Course in Agriculture

In order to assist worthy and needy young men to obtain a practical education along Agricultural lines, and at the same time to furnish the College farm with skillful, reliable and intelligent labor, the Trustees have authorized the organization of a Work-Boy Course in Agriculture.

Into this class, 30 students will be received at the opening of the session. They will be divided into two squads of fifteen men each. One squad will work as laborers on the farm for a week, while the other squad will attend classes. At the end of each week, the squads will interchange, and in that way alternate weeks will be devoted to farm work and to study. A one year course in Agriculture will be completed in two sessions, and will give to the students taking it a practical knowledge of the fundamental principles of farming, stock raising, dairying, etc.

Only mature, earnest and capable young men will be admitted to this class—young men who have spent their life on the farm and who expect to return to farming after finishing the course.

Town boys or others who have not followed farming will positively not be admitted to this class, for the reason that they would be unable, because of their lack of experience, to follow it successfully.

A knowledge of reading, writing and arithmetic is the only scholastic requirement for admission.

Any young farmer or farmer's son, not less than eighteen years of age, without the means to pay for an education, who is in sound vigorous health, and willing to enter into an agreement to work and study faithfully, and, if satisfactory to the College authorities, remain for the two years necessary to complete the course, may become an applicant.

Write to the Registrar for detailed information.

The One-year Agricultural Course

The one Year Agricultual Course is open to young men eighteen years old or over who, since they were ten years of age, have had at least five years experience on the farm.

The purpose of the course is to teach the simple scientific principles upon which good farming rests. Its purpose is to take a young man already a farmer and make him a better farmer. It is not intended to train men who are without agricultural experience to become farmers, because such a task would be difficult, if not impossible to attain in a brief college course.

The One-year Agricultural Course is not a substitute for the regular four year degree course which is recomended to all who have time and means to take it.

The course will begin October 1st and end June 1st, and a certificate of proficiency will be given those who successfully finish the course and stand the final examinations.

The necessary preparation for the course is an elementary school education, including the subjects usually taught through the seventh grade.

In order to get the benefits of cheap board, short course students must live in barracks, and of neccessity be subject to military control. For the sake of economy as well as for military reasons, they will wear the College uniform and in all respects deport themselves as do other cadets.

The cost of the course is as follows:

Board, laundry, heating, and water @$10.00 pr. mo.	$80.00
Incidental fee	5.00
Medical fee	5.00
Breakage fee	3.00
Uniforms—2 coats, 2 pairs trousers and 1 cap	24.55
Total	$117.55

This amount is payable as follows:

Oct. 1st, upon matriculation	$52.55
November 13th,	22.50
January 22nd,	22.50
April 2nd,	20.00
Total	$117.55

Tuition students pay $40.00,—$10.00 additional per quarter. In accordance with the State law, residents of South Carolina are granted free tuition upon presentation of a certificate from the County Auditor. These certificates are issued upon affidavit made by the parents or the guardian to the effect that he or she is unable to pay tuition. The certificate blanks will be furnished by the President upon request.

Necessary books and supplies will cost about $15.00 additional for the session.

A detailed description of the various subjects taught is given in the next few pages.

Outline of the One Year Course in Agriculture
Beginning October 1st and Ending June 1st

Theoretical	Hours Per Week 1st term	 2nd term	 3rd term
Rhetoric	3	3	3
Farm Calculations and Bookkeeping	3	3	3
Horticulture	2	0	2
Agriculture	2	2	2
Animal Husbandry and Dairying	3	3	3
Botany	2	0	0
Entomology	0	2	2
Farm Science	0	2	0
	15	15	15

Practical			
Forge and Blacksmithing	2	2	2
Woodwork and Farm Designing	2	2	2
Horticulture	2	0	2
Agriculture	2	2	2
Animal Husbandry	2	2	0
Veterinary Science	0	2	0
Botany	2	0	2
Entomology	0	0	2
Farm Science	0	2	2
Drill	3	3	3
	15	15	15

Rhetoric

Three hours theoretical per week throughout the year.

A course intended to aid the student in the writing of business letters and in the proper use of the English language both written and spoken. A portion of the time will be devoted to a course in Parliamentary Practice for the purpose of equipping the student for effective leadership in public meetings, farmer's institutes, church and Sunday school work, social gatherings, and committee service. The training is intensely practical. The students issue calls for meetings, organize, and transact business under the supervision and direction of the instructor, who criticises and corrects and points out ways of facilitating the work of the meeting. Students preside in turn over the meetings and thus learn by practice the rules of Parliamentary procedure. Practice is given in writing resolutions, committee reports, motions, petitions, and in the keeping of minutes. Simple questions are discussed briefly with the view of assisting the student in gaining the power of thinking clearly and speaking forcefully while on his feet.

Woodwork

Practice in the use of hand tools, such as planes, saws, chisels, etc., a series of exercises in bench work calculated to show the construction of mortices, dove-tails and joints, followed by a demonstration of all the machines in the planing shop. Instruction will be given, illustrated by black-board diagrams, upon proper methods of the various farm constructions, such as gates and buildings, with special reference to roofs and their supporting frame work.

It will not be the aim of this course to turn out finished carpenters, but to endeavor to give each man elementary practice, and to teach him the fundamental principles of woodwork such as are used in the construction and repairs on the farm.

Forge Work

This course is designed to meet the needs of those who expect to live on the farm. It consists of a graduated system of exercises in steel and iron; embracing such principles as bending, welding, sharpening, etc., which the student will find most useful to him in the upkeep of farm machinery and tools. A limited amount of threading, riveting, brazing and soldering is also given.

Agriculture

Two hours practical and two hours theoretical per week per term throughout the year.

This course embraces lectures and laboratory studies of the more important physical properties of soils and their modification, soil fertility, fertilizers, manure, and crop rotation: class room and field work dealing with the planting, cultivating, harvesting, uses, and improvement of the most important farm crops; lecture and laboratory work dealing with the assembling of farm implements, their use and handling, cement work, rope splicing, and handy farm devices.

Animal Husbandry and Dairying

Two hours per week theoretical and two hours per week practical first and second terms. Three hours per week theoretical third term.

The course in Animal Husbandry will deal with the study of the different breeds and types of farm animals, the conditions for which they are best suited, and the most economical methods of improvement. This will be followed by a study of the most profitable methods of feeding and caring for animals, the principal laws of breeding, the marketing of farm products, and the judging and selection of animals. Special attention will be given to the feeds available in the State and the conditions with which the student will have to contend in the breeding and feeding of live stock.

In the course in Dairying the student will have practice in the use of cream separators, the manufacture of good butter, and the use of the Babcock test in testing milk and its products. This course will cover all the essentials for the successful management of the dairy farm and herd and the making and marketing of dairy products.

Horticulture

Two hours theoretical and two hours practical per week for the first and third terms.

This course is designed primarily to aid the student in becoming familiar with the practical problems of orchard, garden, and greenhouse. The work consists chiefly of the propagation of nursery plants, budding and grafting, pruning, choosing varieties, transplanting, vegetable gardening, soil varieties, location, and cultivation. The greenhouse, orchards, gardens, and campus offer splendid opportunities and furnish abundant material for practical work.

Farm Calculations and Bookkeeping

Three hours theoretical per week first, second, and third terms.

In this course emphasis will be laid upon the fundamental principles of arithmetic and especially upon such as will be useful in all farm calculations. Problems will be given to teach mixing fertilizers, calculating interest, etc.

Botany

Two hours practical and two hours theoretical per week first term. Two hours practical per week third term.

This course is intended to give a working knowledge of plants and their requirements for life and reproduction, with special reference to their improvement by cross breeding. The care and improvement of the farm woodland will be considered.

Some time will be devoted to the study of the diseases of farm crops, and methods for their control and prevention will be considered; this includes directions for the preparation and application of the more common spraying mixtures. Members of the course will be supplied with an abundance of material, both fresh and preserved, for the practical work.

Entomology

Elementary Study of Insects

Two hours theoretical per week second term.

In this course the student considers such elementary insect structure and insect habits as will enable him to understand the work that follows. This course includes the study of spraying, dusting, and fumigating apparatus. Field work is given on the winter habits of field insects together with practical work in controlling insects which destroy stored products.

Orchard and Garden Insects

Two hours theoretical per week third term.

In this course the principal orchard and garden insects are studied. Careful attention is given to the life history and control of these insects.

Two hours practical per week third term.

This course gives thorough and detailed instruction on the application of sprays for controlling insects. It includes a comparative study of the essential parts of the spray pumps and accessories Each student is required to work out a practical problem using an orchard, garden, or shade tree grove within this State.

Veterinary Science

Two hours practical per week second term.

A short practical course taking up the simple diseases of animals and the methods of treatment.

Farm Science

Two hours theoretical and two hours practical per week second term.

This course in Elementary Farm Science is designed to teach such simple principles of physics, chemistry, geology, and meteorology as are necessary to a full understanding of the other courses offered. It will also enable the students to have a better comprehension of Experiment Station and Government Bulletins and of many common every day problems of farm life.

Special Course in Electrical Engineering

Students desiring to take a special course in electrical engineering should remember that no one can hope to become an electrical engineer who has not the necessary foundation in mechanical engineering, to which electrical engineering is a superstructure. Two-thirds of an electrical engineer's training must be mechanical.

No special classes will be formed.

Students desiring to enter the junior class will be expected to be prepared on mechanical drawing, physics and chemistry, and on mathematics. They will be expected to take with the junior class, in addition to their electrical studies, physics, mechanics, mathematics, mechanical drawing and machine shop work. Without these additional branches the student will not be prepared for the more strictly engineering work of the senior year.

To enter the senior class, a student must be proficient in the work of the junior year, in which physics and calculus are completed.

In addition to the electrical subjects prescribed for the senior year, he must take—unless he is proficient along these lines—mechanics, mechanical engineering and laboratory, machine shop, drawing, and machine design.

Students who are not prepared, or unwilling to take the other subjects necessary to the successful study of electrical engineering, will not be permitted to take a special course in this line.

Irregular Courses

Every student is required to pursue one of the regular courses as scheduled on the preceding pages, unless for special reasons this seems inadvisable or impracticable. In such cases an irregular course may be granted by the Faculty on the following conditions:

1. The course applied for must be such as to fully and profitably occupy the student's time.

2. The application must be accompanied by the written approval of parent or guardian and of instructors in all subjects included in the course.

3. Irregular courses are not granted to students in the preparatory class.

4. Diplomas are not issued to students in irregular courses, but a certificate of proficiency will be given when the work completed is deemed worthy of it.

A student who desires to take an irregular course will be referred to a member of the Faculty, who will advise him in reference to the character of the work that is best for him to pursue. After the course has been thus arranged and approved by the Faculty, no other changes will be allowed without the endorsement of his adviser.

Preparatory Course

If a boy is not sufficiently advanced to enter the freshman class and the President concludes that said boy has not had, and can not get, sufficient school facilities at or near his home to prepare him to enter the freshman class, then he will be allowed to enter the preparatory class. In this class thorough instruction is given in the elements of English, mathematics, history, and geography.

If a boy has had or can get sufficient school facilities at or near his home, then he must stand his examination for one of the College classes, and failing to pass the required examination for the freshman class, but must return home.

The instruction in this department is under the immediate supervision of the Headmaster, and is closely articulated with the work in the Academic Department.

The course of study is as follows:

Arithmetic, 4 hours a week; Algebra, 4 hours a week; English Grammar and Composition, 4 hours a week; Reading and Spelling, 4 hours a week; Geography, 2 hours a week; History, 2 hours a week; Penmanship, 1 hour a week.

ENGLISH GRAMMAR

Assistant Professor Sease

The course in Englsh Grammar aims to give to the student a comprehensive knowledge of the principles of the language, and acquaints him with the elementary rules and practices of composition.

Text-book: Kinard's The English Language. Book 2.

In connection with the course in English Grammar and Composition, the students of the class are also instructed in Spelling, Reading, and the Elementary English Classics.

Text-books: Gilbert's School Studies in Words. Hill's Fifth Reader; and such classics as the instructor may from time to time select: Written review work and compositions are required at stated periods throughout the session.

HISTORY

Assistant Professor Sease

The Preparatory course in History is designed to acquaint the student with the chief events in the History of the United States thereby preparing him for his work in this subject in the College classes.

Text-book: White's School History of the United States.

MATHEMATICS

Instructor Wells

In order to pursue this course successfully the student should have a good working knowledge of arithmetic through fractions.

Arithmetic

Thorough instruction is given in all the essential principles and methods of arithmetic.

The class room is supplied with apparatus for teaching compound quantities and measurements.

Text-book: Colaw and Ellwood's Advanced Arithmetic.

Algebra

The work in Algebra extends through quadratics.

Text-book: Well's Algebra for Secondary Schools—Part I.

GEORGRAPHY

Instructor Wells

Thorough instruction is given in the essential principles of geography.

Text-book: Maury's New Complete Geography.

Students who satisfactorily complete this course will be advanced to the freshman class. Those who fail to pass to the higher class may review the course next session. Upon recommendation of the instructors of the department, a student in the preparatory class may be permitted, at any time during the session, to stand examinations for admission to the freshman class.

Degrees, Medals and Honors

The degree of Bachelor of Science (B. S.) will be conferred on any student who satisfactorily completes one of the prescribed four-year courses of study, as tabulated on the preceding pages, and submits an approved thesis not later than June 1st of his senior year. The course pursued is indicated on the diploma.

Distinguished Students.—Students who make an average grade of 90 per cent. or over for any session are designated as **distinguished**; provided, however, that the minimum grade on any subject shall not be less than 80 per cent.

Trustees' Medal.—The Board of Trustees has established a gold medal, to be awarded annually to the best speaker among the representatives of the literary societies at Commencement. These representatives are chosen by judges selected by the societies at the annual public exercises in Memorial Hall. The medal is awarded by judges selected by the Faculty. Won in 1911 by M. W. Wall, '11.

Literary Society Medal.—It is customary for the three literary societies to award gold medals annually for excellence in debate, oratory, and declamation. The medals for excellency in debate were won by B. H. Deason, 11, Calhoun;; John E. Jenkins, '11, Columbian; J. M. Workman, '12, Palmetto.

In oratory by J. T. Crawford, '11, Calhoun; F. H. All, '11, Columbian; O. O. Dukes, '11, Palmetto.

In declamation, by F. L. Ross, '12, Calhoun; M. W. Wall, '11, Columbian; T. C. Haddon, '14, Palmetto.

These awards are for the session of 1910-1911.

The Chronicle Medals.—The Chronicle, the monthly magazine published by the literary societies, also usually awards three gold medals, for the best story, the best poem, and the best essay contributed by students during the year.

A Blue Silk C. A. C. Flag is awarded in June of each year to the best drilled company, and is carried by it during the succeeding year.

R. W. Simpson Medal.—A gold medal thus designated is awarded annually to the best drilled cadet in the freshman, sophomore and junior classes. This medal was won in 1911 by Cadet E. D. Buckley, '14.

Norris Medal.—The following is from Col. Norris' will and covers the conditions upon which the medal is awarded:

"I give $500, face value, Norris Cotton Mill stock, to the Trustees of Clemson Agricultural College of South Carolina, on condition, the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal,' to be awarded to the student of Clemson College meriting the same at graduation, under such rules and conditions as may be prescribed by the said Board of Trustees, and which medal shall have engraved on it '**Honos habet onus**' (Honors bring responsibilities)."

The medal was awarded in 1911 to A. M. Salley, '11.

Publication in Official Army Register.—The names of the three graduates most distinguished in the Military Department each year are published in the **Official Army Register** of the succeeding year.

The Commandant is also required to report annually to the War Department the names of the three cadets most eligible for appointment as officers in the United States Army.

Second Lieutenancy United States Army.—General Orders, No. 39, War Department, contains the following paragraph:

"The reports of the regular inspections of the colleges and schools to which officers of the army are detailed in pursuance of law as principals or instructors will annually hereafter be submitted to the general staff for its critical examination and the chief of staff will report to the Secretary of War, from the institutions which have maintained a high standard, the six institutions whose students have exhibited the greatest interest, application, and proficiency in military training and knowledge. The President authorizes the announcement that an appointment as second lieutenant in the regular army from each one of the said six institutions will be awarded to an honor graduate who has taken a military course thereat, provided that sufficient vacancies exist after caring for the graduates at the Military Academy at West Point and the successful competitors in the annual examination of enlisted men."

The term "honor graduate" signifies any graduates who would rank as one of the first five of his class.

DETAILED DESCRIPTION OF COURSES

1. Agricultural Department

Agronomy (100-106)
Geology and Mineralogy (110-117)
Horticulture (120-122)
Veterinary Science (130-137)
Zoology and Entomology (140-144)
Dairying and Animal Husbandry (150-162)
Botany and Forestry (170-176)

2. Engineering Department

Electrical Engineering (200-203)
Mechanical Engineering (210-215)
Civil Engineering (230-238)
Drawing and Designing (240-249)
Forge and Foundry Work (250-252)
Machine Work (260-261)
Wood Work (270-272)
Architectural Engineering (204-212, 282-288)

3. Chemical Department

Chemisry (300-306)
Metallurgy (310-311)

4. Textile Department

Carding and Spinning (400-409)
Weaving and Designing (410-414)
Textile Chemistry and Dyeing (420-421)

5. Academic Department

English (500-504)
History and Political Economy (510-515)
Mathematics (520-527)
Physics (530-533)
Bookkeeping (540)
German (550-551)

6. Military Science

Military Science and Tactics (600-602)

AGRICULTURAL DEPARTMENT

Professor Harper, Director

AGRONOMY

Assistant Professor Napier
Assistant Gardiner

100. Elementary Agriculture

Freshman Class; First, Second and Third Terms

This course is outlined to serve as an introduction to the regular Agricultural Courses and especially to give a comprehensive view of the subject to students in the Textile and Engineering Departments and to those who will not be in College longer than one year. The object is to familiarize the students with the simpler principles of plant growth, soils, fertilizers and farm crops.

101. Farm Mechanics

Sophomore Class; Third Term
Courses I, II, III

A detailed study of the farm implements, the history of their development, material of which manufactured, work accomplished. The object of this course is to familiarize the students with the latest improvements in farm machinery and especially to impress upon them the saving of labor effected by its use. This will be given both in field and in laboratory.

102. Soil Physics

Junior Class; Second and Third Terms
Courses I, II, III

A study of the physical properties of soils embracing a consideration of the physical composition of soil, soil texture, soil structure, aeration, temperature, and action towards the water supply, with all modifications of these properties by farm practice: given by text-book, lecture and in laboratory.

103. Soil Fertility

Senior Class; First Term
Courses I, II, III

A study of the plant food requirements of soil, farm manures, commercial fertilizers and crop rotations in their relations to soil fertility, with practical work in the field laboratory.

104. Farm Crops

Senior Class; First Term

Courses I, II, III

A study of cotton and cereal crops, their growing, handling, and breeding. Laboratory and field work.

105. Farm Management

Senior Class; Third Term

Courses I, II

This course will include such topics as "the choice of lands for farming;" "location and character of buildings;" "kinds of farming;" "methods of controlling labor;" "stocking a farm" and other economic questions affecting southern agriculture.

106. Farm Crops

Junior Class; Third Term

Courses I, II, III

A course in the study of the principal legumes and grasses, their growing, handling, and improvement. Seed-testing.

GEOLOGY AND MINERALOGY

Prof. Calhoun

110. Elementary Mineralogy

Junior Class; Courses V, VI

This course consists of laboratory study of the common economic and rock-making minerals, the common rocks, and the various natural structural materials. The physical properties of minerals are studied and practice is given in determination of unknown specimens of both minerals and rocks.

111. Mineralogy

Junior Class; Courses III, IV

A comprehensive course in crystallography, physical and chemical mineralogy, and systematic descriptive and determinative mineralogy. Crystallography is taught by lectures and text-book, with laboratory work based on the collections of models and natural crystals; also physical, optical, and chemical properties of minerals, and descriptive mineralogy, covering the more important mineral species. Much of the laboratory work is devoted to the determination of minerals by means of their physical and chemical properties, by comparison with labeled specimens of the systematic collection, and by the use of unlabeled collections for practice in identifying minerals at sight. This course gives a sufficient knowledge of mineralogy for

the geologist, metallurgist, mining engineer, fruit judging and dis-
enable the student to readily indentify all but -ts of South Carolina
studying types.

112. Agricultural Geology

Senior Class; Courses I, II, III

In this course geology is considered in its prac
agriculture. The student becomes familiar with t
rocks and minerals, the influence of the various minera fruit, trans-
in rocks on the texture of soil, the natural mineral ods of pack-
the formation of soils from rocks. The question of ciations, etc.
underground water to wells, springs and artesian wel ture in this
problems and to soil water is studied. The classes of soils
from rivers, wind action and glacier deposits are taken up.
principles and methods of making soil maps are explained. To
graphic and geological maps are studied chiefly with reference t
agricultural problems.

113. Engineering Geology

Courses IV, V, VI

The course in Engineering Geology lays special emphasis on the recognition of common economic rock and minerals together with their use and adaptability for engineering purposes. Structural geology is studied with especial reference to that portion which deals with problems of excavation and quarrying. Geological and topographic maps are examined with the needs of the engineer in mind.

114. Chemical Geology

In this course structural geology, the theory of ore deposits, and the economical side of geology are emphasized. Special stress is aid upon the action of underground water in forming ores and veins. The theories of the formation of various classes of rocks are considered and special attention is given to that side of historical geology which enables the chemist to recognize certain horizons which carry minerals and ores of economic importance.

117. Physiography

Sophomore Class; Courses I, II, III

A laboratory course designed to give the student an adequate conception of the use of the meteorological instruments, weather maps, soil making minerals and rocks, soil types of state, and various other elementary meteorological and geological principles.

For description of equipment, see page eleswhere.

HORTICULTURE

Associate Professor Vincent
Assistant Niven

Instruction is given in the freshman, junior, and senior classes. The theoretical work is illustrated by practical exercises in the garden, orchard, vineyard, greenhouse, and ornamental grounds of the College. The practical exercises enable the student to become familiar with all details of the work.

120. Elementary Horticulture and Plant Propagation

Freshman Class; Second Term

In this course instruction is given both by lectures and text-book. The subjects considered are seed sowing, seed testing, propagation by cuttings, layers, budding, grafting, garden making, and early care of bush and tree fruits.

Text-book: Bailey's Nursery Book.

121. Practical Pomology

Junior Class; First Term
Courses I, II, III

A study of general and fundamental principles of fruit growing. The subjects included in this course are: selection of site, laying out of orchards, preparation of soils, selection of varieties, method of culture, fertilizing, pruning, spraying, thinning, harvesting and packing. Practical problems in growing and handling commercial orchards make this course decidedly valuable.

122. Olericulture—Vegetable Gardening

Junior Class; Third Term
Courses I, II, III

The work in this course covers all phases of garden work, but special emphasis is given to the home garden. The subjects considered are the following: construction, care, management, and uses of hotbeds and cold frames, laying out gardens, preparation of soil, fertilizing, seed sowing, transplanting, cultivation, and treatment for diseases and insects.

Text-book: Newman's Southern Gardener's Practical Manual.

123. Systematic Pomology

Senior Class; First Term
Courses I and III

The description, nomenclature, and classification of our common and subtropical fruits and nuts is carefully studied. In addition the student is given an opportunity for practice in fruit judging and displaying. A collection of fruits from various parts of South Carolina and other states will furnish ample material for studying types.

124. Commercial Pomology

Senior Class; Second Term

Course I

The course deals with the problems of marketing fruit, transportation, storage and storage house construction, methods of packing, packing houses, formation of fruit growers' Associations, etc. The handling of by-products will be made a strong feature in this course.

Text-book: F. A. Vaugh's Commercial Pomology.

125. Landscape Gardening

Senior Class; Third Term

Courses I, III

The subjects considered in this course are propagation and care of flowering plants, bedding plants, shrubs, and laying out and planning home grounds, school grounds, parks, etc.

VETERINARY SCIENCE

Professor Powers
Dr. Feeley
Dr. Burleigh

130. Veterinary Anatomy

Junior Class; Courses I, II

An elementary course including study of the skeleton, principal articulations, muscles of locomotion, etc., arranged as an introduction to the study of the principles of stock judging and physiology.

131. Physiology

Junior Class; Course I, II

This course includes the physiology of the circulatory, respiratory, digestive, urinary and generative organs; the lymphatic circulation and nervous system.

133. Physiological Demonstrations

Junior Class; Course I, II

A laboratory course in chemical physiology.

Text-book: A. Fish's "Exercises in Physiology."

134. Sporadic Animal Diseases

Senior Class; Course II

A brief course in the non-contagious diseases of farm animals, special attention being given to cause and prevention.

135. Contagious Animal Diseases

Senior Class; Course II

In this course the relation of diseases of animals to the health of man is considered, and the bacteriology, modes of transmission, symptoms, cause, prevention, and treatment of the diseases common to man and animals are studied. Especial attention is given to the contagious diseases most common in this state.

136. Veterinary Clinics

Senior Class; Course II

A free clinic is held at the veterinary hospital every Monday afternoon of the session. These clinics are liberally patronized by the stockmen of the surrounding country, and the material thus secured affords practical work in the surgery and the treatment of diseases. Many patients are kept in the hospital for treatment.

ZOOLOGY AND ENTOMOLOGY

Professor Conradi

Assistant Professor Gee

The work of instruction in this division consists of lectures, recitations, laboratory and field work. The work of the first two terms consists of general zoology, and is intended to be a foundation course upon which the following work in applied zoology is based.

Owing to the varied activities of this Division, including the Station laboratory and field work, the State Entomological and plant quarantine work, and the systematic work of the museum, the student has ample opportunity to become familiar with the methods with which these various activities are operated. It enables the student to obtain an insight into practical field, orchard, garden and forest entomology. Ample opportunity is offered the student to familiarize himself with organization methods.

140. General Zoology

Sophomore Class; Courses I, II, III, First Term

This course consists of a study of the fundamental principles of life, including structure, habits and life history of the invertebrate animals. Special emphasis is given the economic aspect, lectures and laboratory dissections of type forms.

141. Vertebrate Zoology

Sophomore Class; Courses I, II, III. Second Term

A continuation of the work of the preceding term. In this the student becomes familiar with the general anatomy, physiology and ecology of typical vertebrate types, together with a general knowledge of the laws of development.

142. Economic Entomology

Sophomore Class; Courses I, II, III. Third Term

The work of this term consists of lectures and laboratory work. Lectures are given on the general principles of insect control, and consists of a study of vulnerable points in insect structure and habits, a study of mechanical control methods and spraying, the consideration of farm, garden and orchard management, and the controlling of injurious insects. The lectures are supplemented in the laboratory with the careful study of insect structure and transformations, and the study of insecticides and spray machinery.

143. Economic Entomology

Junior Class; Courses I, II, III, First Term

A practical study of field crop insects and the methods of controlling them. This is mainly a field course and considers principally the effect of fall plowing, cleaning of terraces and cleansing and cover crops. The student is shown why these various operations are recommended.

144. Economic Entomology

Senior Class; Courses I, II, III, Third Term

A practical study of orchard and garden insects and the method for controlling them. This is a consideration of cultural management and the operations of the various forms of spraying and dusting apparatus.

145. Facts and Theories of Heredity

Junior Class; Courses I, II, III. First Term

A thorough consideration of the biological principles underlying all experimental breeding. The student in this course becomes acquainted with the more important facts and theories operative in the field of heredity.

ANIMAL HUSBANDRY AND DAIRYING

Professor Smith

Assistant Professor Burgess

150. Breeds and Types of Cattle, Horses, and Mules

Junior Class; Courses I, II, III

A study of the origin, characterists, and description of the several breeds and market classes of beef (dual purpose) and dairy cattle; horses and mules; selection and management of breeding stock; methods of improvement, and conditions for which the different types are best suited.

152. Breeds and Market Classes of Sheep and Swine

Senior Class; Courses I, II, III

A study of the characteristics and description of the several breeds of sheep and swine; selection and care of breeding animals; a discussion of pastures, grazing crops, and feeds best suited for them.

153. Principles of Breeding

Senior Class; Courses I, II, III

Principles of breeding, including selection; heredity; atavism; variation; fecundity; methods of breeding; in-and-in breeding; line breeding; study of pedigree; and methods of improving live stock.

154. Stock Judging and Pedigree Work

Junior Class; Courses I, II, III

Judging dairy (dual purpose) and beef cattle, sheep, hogs, and score card practice.

155. Care and Management of Farm Animals

Junior Class; Course II

A study of the methods of marketing farm animals and animal products, advantages of live stock farming, selecting, housing, and caring for breeding animals and work stock.

157. Stock Feeding

Senior Class; Courses I, II, III

Stock feeding, including composition and digestibility of feeding stuffs; their preparation, use, and cost; nutritive ratio; digestion; use of home grown feeds; most economical methods of feeding animals. The available food stuffs of the South are discussed at length.

160. Judging; Compounding Rations

Senior Class; Courses I, II, III

Score card and comparative judging of horses, mules, hogs, beef and dairy cattle. Compounding rations for animals.

163. Practical Work in Animal Husbandry and Dairying

Senior Class; Course II

In order that students may learn every detail pertaining to the practical working of the dairy and feeding problems, all members of the Animal Husbandry section of the senior class will be required to act as foreman of the barns and dairymen and butter makers at the dairy building, for a period of at least one week, details of which will be arranged to meet requirements of the seasons, and the number of students that may be required in each squad.

The students will be expected to perform all operations incidental to these duties, with the regular herdsman and dairyman present to make suggestions and answer questions.

BOTANY, FORESTRY AND BACTERIOLOGY

Associate Professor Hall

Instructor Massey

171. Elementary Phanerogamic Botany

Freshman Class; Courses I, II, III

A preliminary practical course in Phanerogamic Botany consisting of the morphological study of Angiosperms from seed through the entire growth of the plant to production of seed. The students have access to a very full line of fresh and preserved botanical material when the course demands its use.

172. Elementary Cryptogamic Botany

Sophomore Class; Courses I, II, III

A course in the study of Algae, Fungi, Bryophytes, Pteridophytes and Gymnosperms. The work is almost entirely microscopical. The students will secure some material from the field for study, although much will be furnished in the laboratory and class room.

174. Systematic Botany

Sophomore Class; Courses I, II, III

A course in the taxonomic and ecological features of this region with a laboratory and field study of the main types of Angiosperms. From 50 to 100 plants are here identified and classified.

Text-book: Gray's New Manual of Botany, or Gray's Field, Forest and Garden Botany.

175. Elements of Forestry

Junior Class; Courses I, II, III

A lecture, field, and laboratory course dealing with the general principles of forestry, together with the practical methods applied in lumbering, forest propagation and conservation.

Text-book: Green's Principles of American Forestry.

176. Plant Pathology

Senior Class; Courses I, III

A systematic study of fungi with special reference to species causing diseases of economic plants. The students are taught to recognize the more common diseases, particularly in the early stages; and the whole question of prevention and practicable remedies is fully discussed. Methods of isolating, artificially cultivating, and inoculating with disease causing organisms will be considered.

Text-book: Stevens and Hall's Diseases of Economic Plants.

177. Introductory Bacteriology

Senior Class; Courses I, II, III

A brief study of the general character, habits and work of bacteria is followed by practical work in growing, mounting and determining them. Soil and dairy bacteria are given special attention. The principal bacterial contagious diseases and methods of prevention are considered briefly in the class work.

178. Animal Bacteriology

Senior Class; Courses I, II, III

This course treats of dairy bacteriology more in detail, and in addition some time is spent in the study of disease producing forms. The principal contagious bacterial diseases of animals are studied. This course is open only to those who have completed the introduction course in Bacteriology.

ENGINEERING DEPARTMENT

Director Earle

ELECTRICAL ENGINEERING

Acting Associate Professor Dargan

Mr. Shuler

200. Electricity and Magnetism

Junior Class; Course V

Principles of Electricity and Magnetism, instruments, measurements, wiring calculations, direct current dynamos, etc.

Text-books: Timbie's Elements of Electricity, Standard Hand Book for Electrical Engineers, Riggs' and Dargan's Mimeographed Notes and Problems.

201. Electrical Laboratory

Junior Class; Course V

Experimental verification of the fundamental laws of Electricity and Magnetism, including the measurement of current, resistance, electromotive force, capacity, permeability, the tests and calibration of instruments, operation of direct current motors and generators, etc.

Text-book: Riggs, Kyser and Dargan's "Electrical Laboratory Experiments."

A number of the best books on laboratory practice are available for reference.

The student is required to study the theory as well as the manipulation of the experiments, and to express his complete study of each experiment in a carefully prepared written report.

202. Dynamo Electric Machinery

Senior Class; Course V

First Term: Study and design of direct current dynamo-electric machinery. Second and third terms: Study of alternating currents and their application to light and power. Special attention is directed to polyphase systems and apparatus.

Text-books: Franklin and Esty's Elements of Electrical Engineeing; Standard Hand Book for Electrical Engineers; Riggs' Dynamo Design.

Note:—A complete dynamo design, with full set of drawings, is required as part of Course 202 in Electrical Enginereing, and Course 249 in Mechanical Drawing.

203. Electrical Laboratory

Senior Class; Course V

Care, management and testing of arc lighting generators, direct current generators, direct current motors and single and polyphase machinery and apparatus.

Text-book: Riggs' Electrical Engineering Experiments.

For description of buildings and equipment, see page elsewhere.

204. Electric Lighting

Junior Class; Course VIII

Brief resume of fundamental principles in Electrical Engineering. Units, instruments, generation, and transmission of electrical power, etc. Wiring methods, distribution systems, wiring calculation, lighting, heating, and power circuits, gas lighting, call bells, etc. Theory and practice of illumination, shades and reflectors, electric lamps.

MECHANICAL ENGINEERING

Professor Earle
Mr. Shuler

210. Mechanism

Junior Class; Courses IV, V, VI, VII

Spur, bevel, and screw gearing, belt gearing; lobed and elliptic wheels; epicylic trains; escapements; ratchet motions; link motions; quick return motions; cam motions.

Text-book: Stahl and Wood's Mechanism.

211. Mechanics

Junior Class; Course IV, V, VI, VII

Motion, force, velocity, force system, moments of force, general principles and methods of solving problems both analytically and graphically.

Text-book: Maurer's Technical Mechanics.

212. Mechanics

Senior Class; Courses V, VI, VIII

Two hours per week during the first two terms are given to the study of pure mechanics, center of gravity, moments of inertia, work, energy, power, elasticity, resilience, strength of engineering materials, and hydraulics.

Text-book: Maurer's Technical Mechanics.

Note:—Two hours practical Electrical Engineering may be given in place of second term Mechanics.

213. Mechanical Engineering

Senior Class; Courses IV, V, VI, VII

Study of the design and construction of steam boilers, heaters, pumps and injectors; theory of simple, compound and triple expansion steam engines; gas and gasoline engines; hot air engines; air compressors and motors; ice and refrigerating machinery; transmission of power; specifications and the law of contracts. Theory of the strength of engineering materials. Graphical and analytical solution of problems.

Text-book: Ripper's, The Steam Engine.

214. Mechanical Laboratory

Senior Class; Courses V, VI

Study, use and calibration of water-meters, weirs, steam gauges, indicators, dynamometers, calorimeters; tests of fuel and lubricants; tests of building materials, as iron, wood, brick, cement, etc.; setting the valves of the plain slide-vale and automatic cut-off steam engines; indicator practice; horsepower and efficiency of steam, gasoline and hot-air engines and air-compressors and motors; efficiency trials of steam boilers; duty trial of steam pump and of College pumping engines.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

215. Mechanical Laboratory

Senior Class; Courses IV, VII

Study, use and calibration of steam gauges; indicators; calorimeters; tests of building material, as iron, wood, brick, cement; setting the valves of plain and slide-valve and automatic cut-off engines. Practice in running and testing water motors; steam engines; gasoline engines; pumps; firing and testing steam boilers.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice; Thurston's Steam Engine.

216. Testing Laboratory

Senior Class; Course VIII

Testing strength of materials in tension, compression, transverse. The above includes cast and wrought iron, wood, cement, reinforced concrete, stone, etc. So far as possible, the standard methods of making these tests are followed.

CIVIL ENGINEERING

Professor Houston

Instructor Sweeney

230. Descriptive Geometry

Sophomore Class; Courses IV V, VI, VII, VIII

Study of the representation of points, lines, planes, surfaces and solids, and of their relations; tangencies, intersections and developments; numerous original exercises.

Text-book: Low's Practical Solid or Descriptive ,Geometry.

230a. Descriptive Geometry

Sophomore Class; Course VIII

Theory and practice are combined. Problems relating to points, lines, planes, to tangents and normals, to cylindrical, conical, and warped surfaces; to sections, intersections, and developments; to shades, shadows, and perspective.

231. Plain Surveying

Sophomore Class; All Courses

This course includes the general principles and fundamental operations of surveying with compass, level, and transit. The field work includes actual surveys of tracts of land, of which the acres are computed and plats are drawn. Experience is given in problems of laying out and dividing up land, and in locating irregular boundaries. Practice is also had in section and differential leveling.

Text-book: Breed and Hosmer's Vol I. Principles and Practice of Surveying.

232. Higher Surveying

Junior Class; Course VI

Use and adjustment of transit, stadia, solar compass, and plane-table topographic surveying with transit and stadia; railroad topography; triangulation; city and hydraulic surveying; mine surveying; geodetic surveying; map and plan drawing; topographical symbols; photographic surveying, etc.

Text-book: Breed and Hosmer's Vol. I. Principles and Practice of Surveying.

233. Railway Engineering

Junior Class; Course VI

Preliminary and location surveys; location from contour maps; laying out of simple and compound curves; setting of slope stakes; computation of earthwork; switches, turnouts; theory of economic location; effects of grades, curves and length upon the cost of operation.

Text-book: Webb's Railway Construction.

234. Civil Engineering

Junior Class; Course VIII

The use, care, and adjustment of instruments. Theory of leveling; estimates of volume, from contour maps; measurement of areas. The field practice to bear specially on the problems the architect may meet with. The making of contour maps, the estimate of volume in excavation and fill; staking out building plans; setting batter boards, etc.

235-238. General Civil Engineering

Senior Class; Course VI

This course includes a study of building material, mechanics of construction, derivation of practical formulas, masonry construction, foundations on land and in water, stability of walls and arches, analytical investigation of stresses in various forms of roof trusses and bridges, the field and office work in railroad construction; location and construction of country roads and city pavements; hydrostatics, motion of water in pipes and channels, determinations of discharge of streams by current meter and weirs, water power developments, water supply and the disposal of sewerage. In addition, the student is required to hand in a thesis on some engineering work. This necessitates additional field work, and outside study. The College Library furnishes valuable books of reference.

Text-books: Fiebeger's Civil Engineering ; Merriman and Jacoby's Roofs and Bridges, Vol. I.

DRAWING AND DESIGNING

(Includes Architectural Engineering)

Professor Lee
Assistant Professor Klugh
Instructor Birch
Instructor Harris

Throughout the course the best methods of work pursued in the drafting rooms of workshops and manufacturing establishments are given.

240. Freehand Drawing

Freshman Class; All Courses

Graded exercises in sketching from geometrical models, plaster casts, machine parts and other objects in pencil and ink, particular attention being paid to outlines and perspective.

242. Mechanical Drawing

Freshman Class; Courses IV, V, VI, VII, VIII

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; conventional section and shade lines; working drawings of simple parts of machines from sketches and models; tracing and blue printing.

243. Mechanical Drawing

Freshman Class; Courses I, II, III

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; plans and elevations of farm buildings, tracing and blue printing.

244. Mechanical Drawing

Sophomore Class; Courses IV, V, VII

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; working drawings of machines or parts of machines from sketches and specifications. Elementary principles of machine design; construction of screw threads; proportioning of bolts and nuts; tracing and blue printing.

244a. Mechanical Drawing

Sophomore Class; Course VI

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines; topographical drawing; tracing and blue printing.

245. Mechanical Drawing

Junior Class; Course V

Practical problems in mechanism. Lobed and elliptic wheels; spur and bevel gearing; cams; link motion; quick return motion; belt gearing; coupling; riveting, etc.; tracing and blue printing.

246. Mechanical Drawing

Junior Class; Course VI

First half same as Course 245; platting; topographical drawing; tinting; railroad and map drawing; plans and details of buildings.

247. Mechanical Drawing

Junior Class; Course IV

First half same as Course 245. Second half, drawing of furnace designs and other metallurgical appliances.

248. Machine Design

Junior and Senior Classes; Course V

Necessary drawings for work under construction in the shops; details of steam and gas engine and electrical machinery. Design drawing required in graduation thesis.

249. Mechanical Drawing

Senior Class; Course VI

Railroad and map drawing; plans and details of bridges and buildings. Design drawing required in graduation thesis.

280. Freehand Drawing

Sophomore Class; Course VIII

Pencil, charcoal, and pen renderings from casts of sculpture and architectural subjects. Flat and graded washes.

281. Architectural Drawing

Sophomore Class; Course VIII

A course in elementary drawing, involving simple architectural forms and familiarizing the student with their correct proportions. Lettering; study of the Orders.

282. Architectural Design

Junior Class; Course VIII

Application of the Orders; details of doors, windows, etc.; floor plans; elevations; sections of complete buildings. Problems in design in the more important historic styles.

282a. Freehand Drawing

Junior Class; Course VIII

Pen and ink, and water color rendering.

283. History of Architecture

Senior Class; Course VIII

Study of historic styles and monuments of architecture, ancient, mediaeval, and modern. This course is given by illustrated lectures and text-book. The student is required to do research work in the library.

284. Building Construction

Junior and Senior Classes; Course VIII

Study of building materials, their uses and forms; masons' carpenters', plasterers', and painters' work. Estimates and specifications.

284a. Heat and Sanitation

Senior Class; Course VIII

Study of the various systems of heating and ventilating buildings, together with the apparatus used in each, such as boilers, fans, etc. Plumbing of buildings, including water and sewerage.

285. Professional Practice

Senior Class; Course VIII

Lectures and discussions on professional ethics, competitions, contracts, laws, etc.; and the study of the specific requirements of certain classes of buildings, such as school houses, churches, libraries, and hospitals.

286. Architectural Design

Senior Class; Course VIII

Study and design of large compositions rendered in water colors and other mediums. Plans and details of the heavier types of buildings; steel constructions, reinforced concrete, etc.

288. Architectural Engineering

Senior Class; Course VIII

Strength of materials in tension, compression, and shearing. Strength of beams, stiffness, deflection, best cross-sections, built up section; columns of wood, cast iron, steel, etc.; riveted joints; arches; foundations; walls; footings; plain and reeinforced concrete. Fireproofing of buildings.

FORGE AND FOUNDRY

Assistant Professor Gantt
Instructor Heath

250. Forge Work

Freshman Class; Courses V, VI, VII, VIII

Forge work consists of the study of Buffalo down-draft forges, a graduated system of exercises, 24 in number, embracing all the fundamental principles of forging, such as upsetting, bending, shaping, shouldering, punching, squaring, and assembling. The third term is devoted to steel work almost entirely, involving principles of drawing, hardening, annealing, and tempering.

Through the entire course, a working drawing of each exercise is supplied every student; with full explanations, and demonstrations, when deemed necessary.

251. Foundry Work

Sophomore Class; Courses IV, V, VI, VII

Names and uses of molders' tools; tempering and working of molding-sand; making and patching of molds. Work with patterns of various shapes and sizes, illustrating the principles of venting, gating, coring, etc. Grading and mixing of iron; charging and operating cupola. Several weeks are devoted to work in brass molding and brazing. The practical instruction is supplemented by a course of lectures covering the various phases of foundry work.

Text-book: Richard's Elementary Foundry Practice.

252. Forge Work

Freshman Class; Courses I, II, III

Forge work consists of the study of Buffalo down-draft forges; a graduated system of exercises, 21 in number, embracing all the fundamental principles of forging, such as upsetting, bending, shaping, shouldering, punching, squaring, and assembling. The third term is devoted to steel work almost entirely, involving the principles of drawing, hardening, annealing, and tempering.

MACHINE SHOP

Assistant Professor Howard

260. Machine Shop

Junior Class; Courses V, VI, VII

Bench work in chipping, filing, scraping, and polishing is begun first. Students are given instruction in the proper handling of the hammer and chisel, grinding the chisel and chipping cast iron.

They are then required to work a casting to dimensions and quality of finish indicated on a drawing furnished them.

After this chipping is completed, the same casting is filed to flat surfaces, which process is followed by scraping to surface plate and by polishing.

Students are next advanced to lathe work, simple pieces of lathe work being given first.

Practice is given in turning, boring, threading, filing, and polishing, very accurate measurements with both spring and micrometer calipers being required.

From lathe work, the student progresses through the various processes of drilling; shaping, planing, milling and grinding.

Each student is required to do his own tool grinding.

261. Machine Shop

Senior Class; Courses V, VI

The work in the senior year consists in the building of small machines, such as gasoline engines, electric motors, generators, etc., from carefully worked out designs supplied to the students, this work being done under the close supervision of the instructor in charge.

This machine building involves general machine work, and covers the whole field of operations.

The parts of these machines are very carefully checked, and work falling outside the close limits of error is rejected.

These machines become the property of their builders by payment of the price of material used in their construction.

WOOD WORK

Assistant Professor Gardner
Instructor Folk

The course in wood work does not aim to make the student a skilled workman, but rather to teach the proper use of tools, at the same time training the hand and the eye, to impress the importance of marking the exact dimensions, and to induce the proper reasoning necessary to reach a desired end.

The course covers two years, advancing through elementary principles and practice to pattern making, where a series of exercises teaches the fundamental principles. Then large patterns of machines under construction are undertaken, giving the student opportunity to learn commercial shop methods, and to apply intelligently all the principles of pattern making.

270. Wood Work

Freshman Class; Courses IV, V, VI, VII

Use, care and sharpening of tools, exercises to teach use of planes, saws, chisels, squares, etc.

Advanced exercises involving dove-tailing, glueing and polishing. Also full course with face plate and chucking work.

271. Wood Work

Freshman Class; Courses I, II, III

The work is given for two terms only, and is very much the same as Course 270, except that general principles are substituted for some of the details.

272. Wood Work—Pattern Making

Sophomore Class; Courses V, VI, VII

The principles of pattern making are taught with special exercises. Then large and complicated patterns of machines under construction are undertaken, and the large machines in the planing shops are explained and used as needed. Cabinet and furniture making are taken up to gain the use of machines not needed in pattern work.

CHEMICAL DEPARTMENT

Professor Brackett Director

CHEMISTRY

Professor Brackett
Associate Professor Henry
Assistant Professor Lipscomb
Assistant Professor Mitchell

300. General Chemistry

Sophomore Class; All Courses

Inorganic Chemistry.

Text-book: Newell's Inorganic Chemistry for Colleges.

301. Chemical Laboratory

Sophomore Class; All Courses

Introductory work and qualitative anaylsis.

Text-book: Jones' Junior Course in Practical Chemistry.

302. Industrial Chemistry

Senior Class; Courses III and IV

The applications of chemistry in the more important arts and manufacturers. Among the subjects studied are: sulphuric acid; soda; chlorine; potash salts; fertilizers; lime; mortar and cements; glass; porcelain; illuminating gas; coal tar; mineral oils; vegetable and animal oils; soap; fermentation industries, etc.

Text-book: Thorp's Outlines of Industrial Chemistry.

303. Chemical Laboratory

Junior Class; Courses I, II, III, IV, VII

Qualitative and quantitative analysis. Assaying is given in the metallurgical course.

Books used; Jones' Junior Course in Practical Chemistry; Fresenius' Qualitative and Quantitative Analysis; Lincoln and Walton's Quantitative Analysis; Notes on Assaying.

304. Agricultural and Organic Chemistry

Junior Class; Courses I, II, III, IV

The composition of plants, the sources of plant food, the composition of soils, the improvement of soils by chemical means, the composition and manufacture of fertilizers; and the leading facts and principles of organic chemistry.

Text-books: Johnston's Elements of Agricultural Chemistry, edited by Cameron and Aikman. Moore's Outlines of Organic Chemistry.

305. Chemical Laboratory

Junior Class; Courses I and II
Senior Class; Courses III, IV

Quantitative analysis of fertilizers, soil, ashes of plants, water cattle foods and dairy products.

Books used: Bulletins of United States Department of Agriculture, containing analyses adopted by the Association of Official Agricultural Chemists; Lincoln and Walton's Quantitative Analysis.

306. Physical Chemistry

Junior Class; Course IV

Text-book: Jones; Introduction to Physical Chemistry.

METALLURGY

Associate Professor Henry

310. Metallurgy

Senior Class; Course IV

Text-books: Wysor's Metallurgy, Hiorn's Mixed Metals; Notes on Alloys.

311. Chemical and Metallurgical Laboratory

Senior Class; Course IV

For description of buildings and equipment, see page elsewhere.

DEPARTMENT OF TEXTILE INDUSTRY

Professor Doggett, Director

CARDING AND SPINNING

Assistant Professor Taylor

400. Raw Material; Cotton Grading

Junior Class; Course VII

Study of the physical properties of cotton to ascertain the grade, length of staple, and general spinning qualities. The effects of temperature and humidity on fibers.

401. Opening and Mixing

Junior Class; Course VII

Reasons for opening and mixing. When and how to open and mix. Effects of blending on the resultant yarn.

402. Picker Room

Junior Class; Course VII

Arrangement of machinery; construction; setting and speeds for various lengths of fibers; calculations.

403. Carding

Purpose of carding; construction and comparison of different types; grinding, with practice in making all settings; erections and calculations for changing yarns and speeds.

404. Railway Heads and Drawing Frames

Junior Class; Course VII

Purpose, use, construction; comparison of the leather covered rolls with the metallic rolls. Settings and calculations.

405. Fly Frames

Senior Class; Course VII

Slubber, intermediate, fine roving, and jack frames; construction, care and operation. Calculations for draft, twist, lay tension and other gears.

406. Yarn Manipulation

Senior Class; Course VII

Twisting, reeling, spooling, beaming, and slashing; the mixing of size for various kinds of yarns.

407. Combing

Senior Class; Course VII

Sliver lap machine; ribbon lap machine; comber; construction, operation and care of each, with practice in adjusting and tuning.

408. Spinning Frames

Senior Class; Course VII

Construction, comparison and operation of the leading types of modern ring spinning frames; coarse, medium, and fine numbers spun; calculations for the various change gears and constants.

409. Spinning Mules

Senior Class; Course VII

A study of the construction; practice in operating and adjusting; uses of mule spun yarns; calculations for all necessary changes.

Text and Reference Books: Monie's Sizing and Sizing Compounds: Nasmith's Student Cotton Spinner; Taggart's Cotton Spinning; Tompkins' Cotton Mill Processes and Calculations.

WEAVING AND DESIGNING

Assistant Professor McSwain

410. Hand-Loom Weaving

Junior Class; Course VII

The work in the hand-loom weaving is parallel with the course in designing for the first term of the session. The student is required to produce on the loom most of the elementary designs made in designing.

411. Power Loom Weaving

Junior and Senior Classes; Course VII

Power loom weaving is taken up at the beginning of the second term in the junior year, and includes a study of the construction and "fixing" of cam looms for two, three, four and five harness work. A study is also made of the construction and operation of automatic looms, dobby shedding engines, box motions, leno attachments and Jacquards.

412. Designing

Senior Class; Course VII

The course in designing includes the study and construction of the foundation, derivation and combination weaves used for the construction of single and double cloths; and the making of drawing-in and chain drafts for the same.

Instruction is also given in color designing for textile fabrics;

chenille, swivel, lappet and pile fabric designing and weaving.

413. Jacquard Designing

Senior Class; Course VII

Method of building Jacquard harness for straight-through, point and combination tie-ups for fabrics of different design and construction; methods of laying out figures and enlarging sketches for design.

414. Cloth Analysis

Senior Class; Course VII

Methods of finding the counts of yarn in any sample of cloth; determining the construction, weave and weight of any samples so as to produce the same or to find the cost of material in the fabric.

Text and Reference Books: Fox's Mechanism of Weaving; Holmes' Cotton Cloth Designing; Ivey's Loom Fixing; Posselt's Technology of Textile Design; Posselt's Jacquard Machine Analyzed and Explained.

TEXTILE CHEMISTRY AND DYEING

Professor Doggett

420. Textile Chemistry

Junior Class; Course VII

Manufacture, properties, technical analysis and application of the more important inorganic chemicals used in the textile industry; organic chemistry, alphatic series.

The processes used in the laboratory course in illustration are based so far as possible upon the methods used on the large scale.

Text-book: Cohen's Theoretical Organic Chemistry.

421. Dyeing

Senior Class; Course VII

Organic chemistry, aromatic series; general principles of organic synthesis. Dyestuffs, their manufactures, properties, application, identification. The laboratory course includes bleaching, dyeing, calico printing; the preparation of representatives of the different classes of dyestuffs.

Text-books: Olney's Textile Chemistry and Dyeing; Stirm's Gespinstfasern, Zeugdruck, Bleichen, Beizen, und Faerben.

Reference Books: Schultz and Julius' Organic Coloring Matters; Allen's Commercial Organic Analysis; Georgievic's Chemical Technology of Textile Fabrics; Knecht, Rawson and Rosenthal's Manual of Dyeing; Matthews' Laboratory Manual of Dyeing and Textile Chemistry.

ACADEMIC DEPARTMENT

ENGLISH

Professor Furman
Associate Professor Daniel
Assistant Professors Keitt, Bryan, Bradley

The purpose of the course in English is to enable the student to acquire the power to express his thoughts with clearness, precision and force; and to cultivate in him a taste for good literature. Elementary English grammar and the rudiments of composition are taught in the preparatory class.

501. English Grammar and Composition

Freshman Class; All Courses

The work begins with a thorough review of grammar. Attention is given also to word study, and to sentence-structure. Constant and frequent drill is given in theme writing in order to teach habits of correct expression. Methods of using dictionaries, encyclopedias and other reference books are explained practically to the students, who are expected to make use of the college library under direction of the instructors. Stress is put upon the reading of good literature, and full supplementary readings are required, with written reports thereupon.

Text-books: Lockwood & Emerson's Composition and Rhetoric; Buehler's Practical Exercises in English; Benson & Glenn's Speller and Definer; Webster's Academic Dictionary; and such classics as are assigned.

502. Composition-Rhetoric and American Literature

Sophomore Class; All Courses

The study of composition and rhetoric is pursued throughout the session, two hours a week being devoted to the subject. The work for the first term comprises a study of the whole composition, the development of the paragraph, a review of punctuation, and a careful study of the grammatical and rhetorical construction of sentences. The work of the second term takes up the consideration of the kinds of writing, attention being given to narration, description and exposition. The work of the third term is given chiefly to argumentation and public discussion. During all three terms short themes are required weekly, and the themes are rewritten after criticism by the instructor.

One hour a week during the session is given to the study of American Literature. The historical development of the literature, the influences that gave distinctive characteristics to the literature of each period, the lives of the chief writers, and a critical study of short seletions from each make up the principal work of the course. A course in reading embracing the best works of the leading American writers is assigned, and written reports are required.

Text-books: Scott and Denney's New Composition-Rhetoric, Woolley's Hand-book of Composition, Painter's Introduction to American Literature.

503. English Literature

Junior Class; All Courses

The work in this class begins with a critical study of Macaulay as an essayist. Warren Hastings is carefully read in class during the first half of the first term. The remainder of the term is given to the study of English literature down to the close of the Fourteenth Century. During the second term, the literature of our language from the death of Chaucer to the Georgian period is studied historically. In the third term a course is given in modern English writers. The work is supplemented by lectures.

Monthly essays of 700 to 800 words are required together with frequent oral readings embracing selections from the principal English Authors from Chaucer to Tennyson. Two hours per week are given to this course throughout the year.

Text-book: Pancoast's Representative English Literature.

504. Studies in Shakespeare

Senior Class; All Courses

During the latter half of the senior year a course in Shakespeare is given to the entire class. Three plays are read in class and the students are orally examined on all questions grammatical, historical and ethical which arise in the study of this author.

Monthly essays are required.

Text-books: Dowden's Shakespeare Primer and the Arden text of the plays are used.

HISTORY AND POLITICAL ECONOMY

Professor Morrison

Assistant Professor Holmes

The course includes South Carolina History, Commercial Geography, General History, United States History, Civics, and Political Economy.

The method of instruction is a combination of the text-book and lecture methods, with parallel reading as far as practicable under the instructor's direction. The class rooms are supplied with globes, charts, maps, and works of reference, in the use of which the young men are carefully trained. The students make liberal use of the many volumes of poetry, historical romance, biography and history found in the College Library.

The history of the State, of the South, and of the United States receive special attention. "A people that takes no pride in the noble achievements of a remote ancestry will never achieve anything worthy to be remembered by remote descendants."

511. South Carolina History

Freshman Class; All Courses

Text-book: Weber's History of South Carolina.

512. Commercial Geography

Freshman Class; All Courses

Text-book: Olin's Commerial Geography.

513. General History

Freshman Class; All Courses

Text-books: Wolfson's Essentials in Ancient History; Harding's Essentials in Mediaeval and Modern History.

514. United States History,(a); Civics,(b)

Sophomore Class; Courses IV, V, VI, VII
Junior Class; Courses I, II, III

(a) Text-book: Hart's Essentials in American History.
(b) Text-book: Smith's Training for Citizenship.

515. Political Economy

Senior Class; All Courses

Text-book: Seager's Economics, Briefer Course.

MATHEMATICS

Professor Martin
Associate Professor Shanklin
Assistant Professors Hunter, Johnstone, Bramlett

This course presupposes a thorough knowledge of arithmetic and algebra through elementary quadratics (see requirements for admission, page 36.)

520. Algebra

Freshman Class; All Courses

Review of involution, evolution, theory of exponents and quadratics; theory of quadratic equations, simultaneous quadratic equations, indeterminate equations, ratio, proportion and variation.

Text-book: Well's Text-book in Algebra.

521. Geometry

Freshman Class; All Courses

Rectilinear figures; circles; similar figures; comparison and measurement of surfaces of polygons; regular polygons and circles; plane and solid angles; polyhedrons; cylinders and cones; spheres, spherical polygons and pyramids; volume.

Special attention is given to the formation, on the part of the student, of the habit of clear and accurate reasoning and concise expression.

Text-book: Durell's Plane and Solid Geometry.

522. Trigonometry

Sophomore Class; All Courses

Measurements of angles; trigonometric functions; solution of the right triangle, general formulae; solution of oblique triangles; miscellaneous problems; spherical right triangles; formulae for spherical oblique triangles; solution of spherical oblique triangles.

Text-book: Crawley's Short Course in Trigonometry.

524. Higher Algebra

Sophomore Class; Courses IV, V, VI, VII, VIII

Progressions; binominal theorem; theory of limits; convergency; divergency; and summation of series; undetermined coefficients; continued fractions; determinants; theory of equations.

Text-book: Well's Text-book in Alegbra.

525. Analytic Geometry

Sophomore Class; Courses IV ,V, VI, VII, VIII

Junior Class; Courses IV, V, VI, VII, VIII

Cartesian and polar systems of co-ordinates; discussion and construction of loci; the straight line; transformation of co-ordinates; circle; parabola; ellipse; hyperbola; general equation of the second degree involving two variables, higher plane curves; solid analytic geometry; systems of co-ordinates; equation of the plane; the straight line in space; surfaces of the second order.

Text-book: Nichol's Analytic Geometry (Revised Edition).

526. Differential Calculus

Junior Class Courses IV, V, VI, VII, VIII

Differentiation of algebraic functions; trancendental functions;

successive differentiation and development of functions, functions of two variables, tangents and asymptotes; envelopes.

Text-book: Snyder and Hutchinson's Differential and Integral Calculus.

527. Integral Calculus

Junior Class; Courses IV, V, VI, VII, VIII

Elementary forms of integration; rational fractions; integration of irrational fractions; successive reduction; integration of functions of two variables; geometrical applications; rectification of curves; cubature of volumes.

PHYSICS

Professor Poats

Mr. Fant

The study of physics is begun in the sophomore year, and completed in that year by students taking the agricultural courses.

Textile students complete only one-half of the course in General Physics, viz., that given in the sophomore year. Other regular students take physics, both theoretical and practical, during the junior year.

The teaching is by lectures and experiments, interspersed with quizzes, written exercises, and monthly reviews.

In the physical laboratory the student makes, under the supervision of an instructor, a carefully selected and graded series of experiments illustrating the principles of his theoretical course. These experiments serve further to confirm the principles and illustrate the bearing of the subject upon practical matters in general. In fact, the practical application of principles is constantly kept before the student in both lecture and laboratory work.

530. Principles of Physics

Sophomore Class; Courses I, II, III

A complete course in the principles of physics, arranged with special reference to the needs of agricultural students.

Text-book: Millikan & Gale's First Course in Physics.

531. General Physics

Sophomore Class; Courses IV, V, VI, VII, VIII

Properties of matter, physical measurements, mechanics of solids, liquids, and molecules, work, mechanical energy, and heat.

Text-book: Millikan & Gale's First Course in Physics.

532. General Physics

Junior Class; Courses IV, V, VI, VIII

Electricity and magnetism, sound, and light.

Text-books: Reed and Guthe's College Physics; Professor's Notes.

533. Physical Laboratory

Junior Class; Courses IV, V, VI

Physical measurements in English and metric units, investigations in mechanics, heat, sound, electricity and magnetism.

For description of equipment see page elsewhere.

BOOKKEEPING

540-541. Bookkeeping

Freshman Class; Courses I, II, III

The course in bookkeeping is designed to give the students a good working knowledge of the subject. It has been introduced with a special view to enable Agricultural students to keep neat and accurate accounts of all business transactions relative to the farm. The course seeks to familiarize the student with business methods in keeping accounts with parties, firms, banks, etc., and he is given abundant practice in making out business papers, of ordinary occurrence, and in making trial balances, balance sheets, statements etc.

Text used: Sadler and Rowe's "Commercial and Industrial Bookkeeping."

GERMAN

Professor Doggett

This course is designed to give the student a thorough knowledge of the fundamental principles of German grammar, mastery of the main facts of consonant mutation, the ability to read with ease the scientific literature of German, and to develop a "sensitive and trustworthy feeling for the language."

550. German I.

Junior Class; Course IV

The essentials of German grammar, collateral reading; German prose composition.

551. German II.

Senior Class; Course IV

Study of German words and idioms; German-English cognates; translation of literary and scientific German.

Text-books: Paul V. Bacon's German Grammar for Beginners; Hastings' Studies in German Words; Bacon's Im Vaterland; Goethe's

Die neue Melusine, or similar text; Wallentin's Grundzuege der Naturlehre.

Reference Books: Curme's Grammar of the German Language; Heath's German Dictionary; Wershoven's Technical Vocabulary; Eberhard-Lyon's Synonymisches Handwoerterbuch.

MILITARY DEPARTMENT

Captain M. B. Stokes, U. S. Army, Director. Commandant of Cadets

Military Science and Tactics

Captain Stokes

The course in military instrution, as prescribed and followed, is both theoretical and practical.

In addition to the benefit which the general government derives from the military instruction given at this and other colleges, it is believed that the discipline enforced, the habits of obedience and punctuality inculcated, the improvement in bearing and appearance of those instructed, and also the practice in directing and commanding others, which nearly all in the course of time get, is of immense benefit to the student individually.

Theoretical

600. Tactics and Elements of Military Science

Junior Class; All Courses

The theoretical instruction, consisting of talks and lectures, includes the following, as prescribed by the War Department: Infantry Drill Regulations, Small Arms Firing Manual, Field Service Regulations, and Manual of Guard Duty.

601. Military Science

Senior Class; All Courses

Lectures on military history, the military system, and the military policy of the United States.

Practical

602. Military Drill and Target Practice

Required of all Cadets

Infantry drill, including close and extended order; advance and rear guards and outposts; marches; the ceremonies of review, inspection, parades, guard mounting, and escort of the colors; gallery practice; guard duty.

603. Range Practice

Junior and Senior Classes

Complete course of instruction in rifle practice on target range.

GROUNDS, BUILDING AND EQUIPMENT

Location

The College is located on the Fort Hill homestead of John C. Calhoun, on the dividing line between Oconee and Pickens Counties, in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level, and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet. The climate is invigorating and healthful, and the surroundings are in every way favorable to the highest physical and mental development.

The College is one mile from Calhoun, a station on the main line of the Southern Railway, and two miles from Cherrys, on the Blue Ridge Railroad. By means of these roads and their connections, the College is easily accessible from all parts of the State. It is connected by telegraph and long distance telephone with all parts of the country. The post office is conveniently situated on the campus, and receives five daily mails.

Campus and Farm

The College grounds occupy about 1544 acres of land, including the campus, sites of buildings and residences, the College farm, and the Experiment Station grounds. The campus, including about 200 acres, is laid out in walks, drives, and lawns, and is shaded by a beautiful grove of native forest trees.

The Main Building, Barracks, Etc.

The Main Building is a three-story brick structure, 130 by 149 feet, trimmed with gray sandstone. It contains 21 rooms, including recitation rooms, library and reading room, literary society halls, physical laboratory, and the offices of the President, the Commandant, the Treasurer, and a reception room. Adjoining this building is Memorial Hall, the College Chapel, which has a seating capacity of about one thousand. It is used for religious services and as an assembly room. In the tower of this building is a tower clock. The building is provided with steam heat and electric lights.

Division of Physics

The physical lecture room and laboratory is situated in the main College building, is 33 by 60 feet, and is well equipped with apparatus for both the lecture and the experimental work of a general course in physics.

The Cadet Barracks comprise three large brick buildings. One is four stories high and contains 197 rooms for students, two Y. M. C. A. rooms and a large Y. M. C. A. assembly hall. In the basement of this building is the dining hall 134 by 44 feet and the kitchen 50 by 37 feet.

The second building is 199 by 42 feet, and contains 104 rooms. The third building is 45 by 190 feet and contains 111 rooms. These buildings are heated by steam and lighted by electricity, and have an abundant supply of pure water. The rooms in the barracks are furnished with single-width iron cots and other necessary appointments. The dining hall is well supplied with table linen, silverware, and china, and the kitchen is furnished with modern culinary appliances.

The bathrooms and closets are located in brick buildings apart from the barracks and connected with them by covered gangways.

The General Water Supply is collected from springs and surface streams, and pumped from two stations into a standpipe one hundred feet high, having a capacity of 130,000 gallons. From this it is distributed through mains to the various College buildings and to all parts of the campus. This water is used for fire protection, sewerage, etc.

The Drinking Water Supply is pumped from a bold spring through the barracks, in a continuous stream. It is thus furnished fresh, pure and cold. This and all sources of water supply are kept under constant and strict surveillance, and the waters are frequently analyzed as a precaution against contamination.

The Sewer System.—All of the larger buildings and most of the residences are connected with an adequate sewer system, which empties into the Seneca River more than half a mile from the campus.

Light and Heat.—All of the College buildings and most of the residences on the campus are lighted by electricity furnished from the central power station. The eight principal College buildings are heated by steam.

Central Power and Heating Plant.—This plant contains two 150 H. P. Stirling water-tube boilers, and two 100 H. P. Lombard return tubular boilers, with the necessary pumps, feed water heaters, and other auxiliary apparatus.

The power equipment consists of one 114 H. P. Fleming side-crank engine, direct connected to a 70- K. W. 2,300 volt, three-phase alternator with direct connected exciter, and one 122 H. P. Fleming four-valve engine direct connected to a threee-wire 75 K. W. direct current generator..

A 75 K. W. rotary converter is used to convert from one kind of service to another.

The switchboard equipment consists of three standard blue Vermont panels, and three black enameled slate panels, all equipped with the latest and best electrical instruments and appliances. The alternator is connected to the rotary converter through the 25 K. W. transformer. All the machinery is of the General Electric Company's make.

The building is 40 by 80 feet, is a single story of brick and cementblocks, with metal roof.

The plant complete cost about $25,000, and is in every way modern and up to date. It furnishes steam heat for the Barracks and other College buildings, and electric lights and power to every department of the College and the residences of the community. Two pumping stations, situated about one-half mile distant, are electrically operated from this plant. These pumping plants have both steam and electric pumps and an aggregate capacity of 1,200 gallons per minute.

Agricultural Buildings and Equipments

The Agricultural Hall is a building 146 by 94 feet, in colonial style, and constructed of red side-cut brick, with columns and trimmings of oolitic limestone. It is furnished with a complete system of electric lights, water and sewer connections, and steam heat; and provides class rooms and laboratories for instruction in agriculture, horticulture, soil physics, botany and bacteriology, zoology and entomology, geology and mineralogy, and offices and laboratories for the Experiment Station. It also contains the museum and gymnasium hall.

The Horticultural Grounds embrace an area of twenty acres. Three acres are devoted to apples for experiment purposes, one acre to peaches, one acre to grapes, one acre to pecans, one acre to nursery, ten acres to experiments with small fruits and vegetables, and three acres to ornamental trees, shrubs, and flowers.

The Greenhouse is 21 by 140 feet, and is heated by hot water. It is used for class instruction in ornamental horticulture and for experiment work. The house now contains one thousand large pot plants of various kinds and six thousand small plants used for bedding purposes on the College campus.

There is another greenhouse with a center building 30 by 30 feet, and two wings, each 20 by 30 feet.

The Cannery is a frame building 25 by 35 feet. It is equipped for canning fruits and vegetables of all kinds.

The Veterinary Hospital is a two-story frame building 48 by 65 feet, with basement 18 by 30 feet. It is furnished with electric lights, hot and cold water, and is heated by means of stoves. The basement contains a store room, dog kennels and a small room for hot water plant, etc. The class room, office, pharmacy and a well equipped clinic and operating room are on the first floor. A laboratory for class work—a private laboratory and a store room for supplies are on the second floor.

The stable, containing seven box stalls, grain room and hay room, are in an adjoining building.

There is a well-sodded lot containing about two acres connected with the hospital. It is fenced with woven wire and divided into three paddocks. A laboratory for the preparation of anti-hog cholera serum—buildings for hogs, feed, etc. are on land adjacent to—but at a safe distance from the Veterinary Hospital.

The Three-Story Dairy Building just completed is built of red brick, and is one of the most modern and best equipped buildings of its kind to be found anywhere in the country. It contains the offices of the Animal Husbandry and Dairy Division, of the Extension Division, and a number of large, well lighted, properly ventilated class rooms and laboratories together with a large assembly room for farmers' meetings and short course work. It is splendidly equipped with the latest modern machinery for manufacturing dairy products, separating, testing, and marketing milk, experimental work, and for teaching modern methods of dairying.

The new **Dairy Barn** will accommodate both the Experiment Station and College herds. It is large enough to hold 120 cows with separate box stalls for bulls and young stock, and all the feed required for these animals.

There are also four large cement silos conveniently located for feeding. The floors are of cement with cork brick for the cattle to lie on. The lighting, ventilation, sanitation, stanchions, stalls, and the equipment for cleaning and feeding and handling the milk are the most modern to be found in the country.

Farm Buildings.—The College farm is provided with commodious barns and other farm buildings of modern design, which are described more fully in connection with the equipment for instruction in Agronomy.

Division of Agronomy

The class room, the laboratory, and the office of the Agronomy Division are located on the first floor of the Agricultural Hall. The laboratory is supplied with the necessary equipment for the study of the various types of farm crops and the testing of seed for purity and germination.

The College farm has a large mule barn, implement and wagon sheds, and two large cribs for the storage of corn.

The College Farm is well supplied with agricultural machinery and implements, such as the following: Reapers and binders, corn harvesters, mowers, hay rakes, single and double-row corn planters, cotton planters, ensilage cutter, shredder, gasoline engine, various kinds of mold board and disc plows, riding and walking cultivators, harrows and weeders, and fertilizer and grain drills.

Division of Geology and Mineralogy

The division of geology and mineralogy occupies three rooms on the second floor of the Agricultural Building.

The systematic collections contain about 2500 labeled specimens of rocks, minerals and fossils. These are exhibited in glass cases in the laboratory and the museum, and are available to students and the public. A collection of the minerals and rocks of South Carolina is a prominent feature of the exhibit. There is also an unlabeled colection of minerals for practice in identifying species at sight; and unlabeled collections of the most important minerals are provided for determinative work in the laboratory.

The laboratory is supplied with water and gas and all apparatus and reagents necessary for the determination of minerals by means of their chemical and physical properties. A chemical balance, a petrographic microscope, a photomicrographic camera, and all essential accessories, are also provided.

The class room is supplied with large physical wall maps of the world and of all continents, a complete series of topographic contour maps, furnished by the United States Geologcial Survey, an 18-inch terrestrial globe, a 20-inch relief globe, a set of geological and geographical relief models, and several hundred lantern slides.

The geographical department of the College library contains the principal standard works of reference in geology and mineralogy, and receives all the publications of the United States Geological Survey as issued, including annual reports, monographs, geologic folios, and bulletins.

Soil Physics

The soil physics laboratory is located on the ground floor of the Agricultural Hall and is provided with apparatus for the determination of water content, absorptive capacity, water holding power, and other physical properties of soils, and for performing experiments in evaporation, percolation, capillarity, etc., and making mechanical analyses.

Division of Horticulture

The classroom of the Horticultural Division is located on the first floor of the Agricultural Hall. The greenhouse, the hotbeds, and the cold-frames are located in the Horticultural grounds, where the principal practical work is done. The gardens, orchards, and the vineyards are field laboratories for instruction in horticulture.

Division of Veterinary Science

The veterinary hospital has been described in the account of "Grounds and Buildings" on the preceding pages.

The classroom, laboratory and the office of the Veterinary Division are located in the Veterinary Hospital. The laboratory is supplied with microscopes, incubators, sterilizers, chemicals, skeletons, anatomical specimens, plaster casts, and other equipment for technical work.

Division of Dairying and Animal Husbandry

The classrooms and laboratories are located in the new Dairy Building.

The courses offered in this division treat in as direct and practical a way as possible all subjects which pertain to the breeding, feeding, judging, selecting, improvement, and care and management and marketing of live stock, and management of stock farms.

A thorough training is given in the manufacturing of dairy products, testing and marketing milk and its products, keeping records and managing dairy herds.

The division is well equipped with all the prominent breeds of beef and dairy cattle, five different breeds of hogs, several types of horses, and a large number of mules, and the student is given every opportunity to become proficient in the judging, feeding, and management of live stock.

Division of Zoology and Entomology

Office and Research Laboratory.—The main office and research laboratory of this Division is located on the second floor of Agricultural Hall. The office is equipped with modern records systems for operating laboratory, office and field work. The laboratory is equipped with compound microscopes, photographic outfit, microtome, binocular, dark ground illuminator and incubators. The entomological collections are kept on this floor. The economic forms, arranged according to food plants, are kept in the museum while the systematic and research collections are kept in standard Schmitt boxes in the laboratory.

A carefully selected entomological library is kept in the main office.

General Laboratory.—This laboratory is located on the first floor of Agricultural Hall, and is equipped with simple and compound microscopes, dissecting instruments, lantern slides, models and charts. A new locker system has been installed and the laboratory is also provided with the most modern laboratory tables. The laboratory chairs are all adjustable in order to provide comfort to the student. This feature of the laboratory prevents physical unrest during long laboratory periods.

Insectary.—The insectary is located on the ground floor of Agricultural Hall, and is equipped with the various types of ordinary breeding cages; also the various types of root, parasite and ant cages; several types of Berlese collecting apparatus are provided, as well as a system for temperature and moisture control for biological purposes. A complete system of spray and fumigating apparatus is housed in the insectary.

Field Laboratories.—Two field laboratories are in operation and the student has access to the methods employed in these laboratories as well as the current records.

Division of Botany, Forestry and Bacteriology

The laboratory and classroom are located on the first floor of Agricultural Hall. They contain a good equipment for satisfactory work in botany, forestry and bacteriology, including 25 dissecting microscopes, 27 compound microscopes, microscope slides, lantern slides and charts, Zimmerman and Minot rotary microtomes, embedding baths, balances, incubator, Arnold & Koch sterilizers, autoclaves, dry ovens, anaerobic appartus. The students have access to a small botanical and bacteriological library.

A creditable beginning has been made in collecting a herbarium. The herbarium has been installed in new insect-proof cases on the museum balcony. The general collection includes the Anderson herbarium of 2,500 mounted specimens, about 700 mounted specimens of American violets, and 1,000 mounted specimens of flowering plants of Central New York, as well as a set of the F. V. Coville plants, of New York State. The South Carolina herbarium contains over 1,200 mounted specimens, representing the South Carolina flora, and is kept separate from the general herbarium.

Some material has been collected and placed in the museum for exhibition purposes, but as soon as these collections are completed they will be used as demonstration material for classwork.

Engineering Buildings and Equipment

The Mechanical Engineering Building is a substantial brick structure containing about 35,000 square feet of floor space. On the first floor are mechanical laboratory, machine shop, wood shops, forge shop, and foundry. On the second floor are the offices and the drawing and designing rooms. The third floor is devoted to class rooms and to the division of civil engineering.

The Electrical Instrument Laboratory is a brick building of special design, arranged especially for delicate instrument work.

The Dynamo Laboratory is a modern brick structure 37 by 80 feet. Besides containing the dynamo electric machinery for instructional use it also contains the electrical engineering lecture room.

Division of Mechanical Engineering

This laboratory is situated on the ground floor of the Engineering Building, and occupies a room 51 by 45 feet, and contains the following equipment:

For Steam Engineering.—One 15 H. P. horizontal, locomotive type boiler; one 6-H. P. vertical boiler; one 6-H. P. Erie, plain slide valve steam engine, throttling governor; one 5-H. P. vertical engine built by student; one 15-H. P. Payne high speed automatic cut-off engine; one Corliss cross compound engine, arranged to run either condensing or non-condensing and with either or both cylinders with high pressure steam; one 7-K.W. Curtis steam turbine non-condensing, direct connected to a two-pole direct current compounded generator; one Wheeler surface condenser, with combined air and circulating pumps; one set steam gauge testing apparatus; one Carpenter's Separating Calorimeter; two Carpenter's Throttling Calorimeters; six steam engine indicators of various makes; four injectors; two draft gauges; five steam gauges.

For Hydraulic Engineering.—One power triplex pump; one Pelton water motor; two hydraulic rams; three duplex pumps of different makes; one weir; one Hook gauge; one altitude gauge.

For Compressed Air.—One Clayton air compressor, water jacketed; one improved air motor.

For Fuel and Lubricants.—One Carpenter's coal calorimeter with scales, balances and oxygen generating device; one standard viscosimeter; one Thurston friction tester.

For Testing Materials.—One 100,000-pound Olsen automatic vertical testing machine driven by 5-H. P. Westinghouse electric motor, and fitted for either tension or compression; one Fairbank's cement testing machine; one Vicat needle with proper sieves and moulds; one graduated flask for determining specific gravity; one moist closet for storage; one 3,000-pound tranverse testing machine.

The laboratory also contains a 5-H. P. Otto gasoline engine; one Ericsson hot air engine; a 6-H. P. transmission dynamometer, graduated to read horse-power direct and built by students; four platform scales; four spring balances; seven mercury thermometers; one electrical resistance thermometer; two Bristol thermo-couples for reading temperature to 2,000 and 2,900 degrees F. respectively. All apparatus is so arranged that it may be used for separate or combined tests. Besides the apparatus in this room, the apparatus in the Power Station and the Pumping Stations are available for instruction and tests.

Division of Electrical Engineering

This division occupies two single-story brick buildings, heated by steam and lighted by enclosed arc and incandescent lamps.

Electrical Instrument Laboratory.—This is a separate building, especially designed for delicate electromagnetic work, no iron, steel or other magnetic substances having been used in its permanent construction. Its equipment contains the following instruments and apparatus: Leeds and Northup potentiometer with certified standard resistances for measuring both current and potential; Kelvin deka ampere balance; Weston laboratory standard voltmeter with multipliers; Becker analytical balance and weights; two 1-6-H. P. Crocker Wheeler motors; sixteen galvanometers, (including tangent, Kelvin, D'Arsonal and ballastic instruments); nine standard resistance sets; three standard resistance and Wheatstone Bridge sets; four meter-wire bridges; one magnetometer; two standard condensers; commercial condensers; Weston and Carhart-Clark standard cells; ammeters; voltmeters; rheostats; keys; switches; storage cells; primary cells; and other miscellaneous apparatus; also a quantity of special apparatus made in the College shops and laboratories.

The instruments in the above equipment are from such makers as Elliott Brothers; Nadler Brothers, Leeds and Northup, Queen and Company, Weston Electrical Instrument Company, etc.

Dynamo Laboratory.—This building is 37 by 80 feet, with basement. The main floor is divided into a lecture room 35 by 25 feet, and a laboratory 35 by 53 feet. The basement contains a supply room and a large dark room.

The lecture room has raised seats, and is equipped with instruments, illustration models and other demonstration apparatus, including an electro-magnet capable of supporting the weight of two tons.

The dynamo laboratory equipment contains the following instruments:

Voltmeters.—Six Weston, six General Electric Co. Thomson, one Jewell, one Whitney, one Ayrton and Perry, one Hoyt, one Kelvin electrostatic, one Cardew.

Ammeters.—Three Weston, five Weston millivoltmeters with current shunts, twelve General Electric Co. Thomson, one General Electric Co. hot wire, one Westinghouse portable, one Siemens Electro-dynamometer, one Jewell.

Wattmeters.—Three Weston indicating, two General Electric Co. Thomson indicating, two General Electric Co. Thomson recording, one General Electric Co. induction.

Miscellaneous Instruments.—Two Schaeffer and Budenberg portable tachometers, speed counters, stop watches, current and potential transformers for instruments, etc.

Direct Current Dynamos: 17-K. W. Lundell, 15-K. W. Mather, 2½-K. W. Crocker-Wheeler, two 2-K. W. Kester, 15-H. P. Kester, 10-H. P. Kester, ½-H. P. Kester.

Arc Lighting Apparatus: Brush and Thomson-Houston generators, a General Electric Company constant current transformer, open and inclosed arc lamps.

Alternating Current Apparatus: 15-K. W. General Electric Company, single, two, three and six phase revolving field generator, complete with marble switch board and full set of indicating instruments. 7½-K. W. General Electric Company single, two and three phase rotary converter, 7-K .W. three phase converter built by students. General Electric Company single, two and three phase induction motors, three 3-K. W. and three 5-K. W. constant potential transformers. General Electric Company condensers, assortment of coils, models, etc.

Miscellaneous: 50-H. P. high speed McEwen automatic engine, 3-ton portable crane, prony brake, rheostats, circuit breakers, switches, fuse testing apparatus, lightning arresters, etc.

The dark room is equipped with apparatus for high potential, high frequency and X-Ray work, and a Deshler-McAlister central station photometer with rotating stand for incandescent lamp testing.

The machinery in the dynamo laboratory is driven by the 50-H. P. engine and by motors. Steam and electric power for these is furnished by the central power plant, described on another page. Students have access to this plant, and to the other electrical equipment of the College. They are thus enabled to study the practical working of a combined electrical power, light and heating plant, and to study the problem of power distribution and utilization from a practical example.

Division of Civil Engineering

The collection of field instruments contains the following:

Two complete transits with solar attachments; three engineer's transits; four railroad compasses; two six-inch vernier compasses; one precise level; three twenty-inch wye levels; one dumpy level; two architect's levels; one convertable architect's level; one drainage level; one Locke hand level; one binocular hand level; two stadia hand levels, with a supply of self-reading and target rods. One complete plane table; a Price current meter, with steel boat and truck; sextant; aneroid barometer; flag poles; tapes; chains and all necessary accessories.

The office equipment includes planimeter, slide rules and drafting instruments.

Division of Drawing and Designing

This division is located on the second floor of the Engineering Building, and occupies seven rooms, two of which are used by the freshman class in Freehand drawing, two by the freshman class in Mechanical Drawing, one by the sophomore class in Mechanical Drawing, one large room by the junior and senior classes in Mechanical Drawing and Machine Design, the other as an office.

These rooms were designed for the use of the division, and are of ample size, well lighted, and well equipped with individual lockers for about 500 students, and drawing tables for about 25 students at a time in each room.

They also contain a large number of models of various kinds; reference books and tables; and a display of catalogues and drawings from manufacturing firms, and of the best student work, all of which are of great benefit to the student in his work. The more expensive and less used instruments are kept in the office for the use of any student needing them. Two blue print rooms adjoin the other rooms of the division, and are well equipped with all necessary frames and apparatus for printing by electricity and sunlight. All students are required to furnish their own instruments, boards, T squares and other material. They are advised to buy these at the Cadet Exchange, where samples can be seen and wholesale prices obtained. All drawing tools used by students must be approved by the instructor in charge; second hand or inferior instruments will not be accepted. Students make a mistake in buying low-priced instruments, which appear to be of good quality, but are inferior and will not give good service, soon necessitating the purchase of another set.

Division of Forge and Foundry Work

Forge Shop.—The forge shop is located in a wing of the Mechanical Engineering building, and occupies a room 37 by 44 feet. The equipment is installed under two separate systems. One system consists of 18 Buffalo down draft forges; 18 Eagle anvils equipped with small tools; a 60-inch exhaust fan; a No. 4 direct connected pressure blower; a drill press; and emery grinder; a bending cone; a Buffalo iron shear; two swage blocks; a vise and work bench. The other system consists of 18 Sturtevant down draft forges; 18 Eagle anvils thoroughly equipped with small tools; a 60-inch exhaust fan, and a No. 4 pressure blower, both directly connected to electric motors.

The Foundry occupies a space of 43 by 76 feet, and is free from posts and other obstructions. It is equipped with a 26-inch Victor Colliau's cupola; a No. 7 pressure blower; a Millets core oven; a large Paxon brick core oven; a two-ton post crane; eight improved molders' benches with full equipment of molders' tools for eighteen students; also, a full equipment of hand, bull, and truck ladles.

The brass foundry is equipped with an 18-inch brass furnace; a drying stove, clamps, boards, and flasks for molding; two graphite crucibles and crucible tongs; one Ferrofix brazing machine, with full equipment for doing diversified cast iron brazing.

Division of Machine Work

The Machine Shop occupies the ground floor and part of the basement of the south-west wing of the Engineering Building, the main floor being 45 by 100 feet, lighted from one end and both sides, and steam heated.

The equipment is as follows; suitable benches and vises for chipping, filing, etc., and for assembling machines; one 18-inch 12-foot engine lathe; one 18-inch 8-foot engine lathe; eleven 14-inch sixfoot engine lathes; one 10-inch four-foot turner's lathe; one 15-inch 8-foot speed lathe; two universal milling machines; two 18-inch vertical drilling machines; one 28-inch vertical drilling machine; one 22-inch 6-foot planer; one universal tool and cutter grinder; one 10-inch by 32-inch universal grinding machine; one 14-inch shaping machine; one 10-inch slotting machine; one 22-inch wet emery tool grinder; one twist drill grinder; one dry emery grinder; one 36-inch grind stone; one power hack saw; one fan blower; forge, anvil, and set of smith's tools.

Twelve sets of tools in portable cases are provided for the use of the students, each set containing an assortment of chisels, files, cutting tools for lathe work, hammer, monkey wrench, steel scales, screw driver, spring calipers, dividers, scriber, rule, center punch, center gauge, one inch micrometer caliper, oil can and cotton waste.

A tool room is located in one end of the shop, in which is kept an extensive assortment of tools, some of which are: a set of twist drills from 1-16 to 2 inches; a set of machinist hand reamers from 1-8 to 4 inches; a set of Morse standard taper reamers; a set of taper pin reamers; a set of internal and external caliper gauges from ¼ inch to 2½ inches; a set of U. S. standard taps and dies from 1-16 to 1¼ inches; a set of clamps, dogs, lathe, planer and shaper tools, milling machine cutters and emery wheels; a center grinder; standard gauges; and internal and external micrometer calipers from 0 to 6 inches.

A supply of steel and brass, and a large assortment of screws, bolts, nuts, etc., are kept in stock.

All of the machines are driven from one line shaft, running the full length of the shop, and driven by a 15-horse power electric motor that was built in the shop.

Artificial lighting is accomplished by means of four arc lamps.

Division of Woodwork

The Woodwork Division consists of two shops, both on the ground floor. The first, 37 by 100 feet, is divided into two class rooms, both of which are supplied from one well-equipped tool room.

The freshman classroom contains eight turning lathes, and fifteen work benches, each supplied with a full set of tools.

The sophomore classroom is equipped with eight turning lathes with tools, eighteen work benches, and ninety sets of bench tools, a separate set for each student. This room also contains a large pattern lathe, one 30-inch band saw, one jig saw, two grind stones, and one universal trimmer.

The other shop is equipped with planing mill machinery, consisting of a double-roll planer, one rip saw, one cross-cut table saw, one swinging cut-off saw, one lathe with 12-foot bed, one jointer, one moulding machine, one tenoning machine, one doubleheaded shaper, one single spindle carver and shaper, one mortising and boring machine, one re-saw, one swinging arm sand papering machine, and an assortment of benches, clamps, glue pots, etc.

This shop is 40 by 100 feet, and is driven by a 20-H. P. electric motor. Each classroom also has its individual motor drive.

A lumber yard and steam dry kiln adjoins.

Chemical Buildings and Equipment

The original chemical laboratory is a two-story brick building, 50 by 80 feet, covered with slate and finished inside with Southern pine. Overlapping this at one corner, and connected with it by a glass-enclosed passage, is a new somewhat similar building, 55 by 86 feet, of modern style and handsome design. This double building, which is well ventilated, heated by steam and lighted by electricity, constitutes a commodious structure adequate to all the needs of the department.

On the first floor of the old building, which is used for academic work, there are five rooms. Three of these are employed as laboratories for agricultural seniors and juniors. Of the remaining rooms on this floor, one is a balance room, while the other is used as a classroom.

On the second floor of this building there are two large laboratories, one for the juniors in analytic chemistry, the other for the sophomores in general chemistry. A third, and smaller room, is used as a balance room.

The junior laboratory will accomodate 72 students, 36 at a time; the sophomore laboratory, 120 students, 60 at a time. The laboratories are all provided with hoods for carrying off noxious gases, convenient working tables, water, gas, electric lights, and all necessary appliances for experimental work.

The basement of the building is used for assaying, for the preparation of distilled water, and for storage. The air pump and the mixer of the gas machine for supplying the laboratories with gas are placed in this basement and connected with the generator, which is buried 85 feet from the building.

On the first floor of the new building there are nine rooms, all of which are appropriated to state analytical work. On one side of the wide hall, which extends the entire length of the building, are the rooms for the analysis of fertilizers. Three of these rooms are used, respectively, for the determination of phosphoric acid, nitrogen and potash; the fourth as a balance room; the fifth and last as a sample room. On the other side of the hall there are four rooms. The largest of these is a laboratory used for state analytical work. Adjoining is a balance room, in which provision is made also for electrolytic apparatus. Of the remaining rooms, one is used for water analysis and for miscellaneous analytical work, the other as the office of the director.

On the second floor of this building there are seven rooms; a lecture room, and six smaller rooms, which are used for recitations, cabinets, apparatus, chemicals, library, and professor's laboratory.

The lecture room will seat 170 students, the seats being arranged in tiers.

The hoods in each buliding are all connected by earthenware pipes with a tightly built room just under the roof. Each of these rooms is connected with a large ventilator.

The rooms in the basement are used for assaying ores, and for storage. In one of these rooms there is a gas machine for supplying gas especially to the new building, though this machine and the one in the old building are so arranged that either may be used to furnish gas to both buildings in case of necessity.

Textile Building and Equipment

This building is a brick structure of modern cotton mill design, 168 by 75 feet. It is of the slow burning type, built according to fire insurance regulations, after plans of an experienced mill engineer. The building, although designed for educational and experimental purposes, containing office, lecture-rooms and laboratories, retains the more prominent features of a typical Southern cotton mill. This affords the student an opportunity of gaining many points of valuable information in connection with mill construction, along with the manipulation of cotton fibres and the study of cotton mill processes and operations.

The first floor is occupied by the picking, carding and spinning machinery, a lecture room, the main office, an exhibit room and the departmental library. The machinery on this floor is driven by two electric motors, one a 30-H. P., 220-volt, direct current Westinghouse motor, driving the carding machinery, and a 20-H. P., 220-volt, direct current General Electric Company motor, driving the spinning machinery.

The second floor is occupied by two weave rooms, three lecture rooms, laboratory for organic chemistry, an office and two store rooms. The power looms on this floor are driven by a 20-H. P., 220-volt, direct current General Electric Company motor.

The basement, which is situated under the north end of the building is occupied by the dye-house and laboratory for industrial chemistry.

The building is equipped with a system of "Vortex" humidifiers from the American Moistening Company; steam-heating system and automatic fire-sprinklers from the D. A. Tompkins Company; shafting, pulleys and hangers from Jones & Laughlin, Ltd., and from T. B. Wood's Sons.

Division of Carding and Spinning

Picker Room

The equipment of this division is as follows:

Pickers.—One Atherton automatic feeder; one Atherton breaker lapper; one Atherton finisher lapper; pickers are equipped with Brown-St. Onge patent adjustable grid bars.

Card Room

Cards.—One Mason 40-inch revolving top flat card.

Double Carding Process.—One Saco & Pettee 40-inch breaker card; one Saco & Pettee 20-inch improved lap winder; one Saco & Pettee 40-inch finisher card.

Combing.—One Mason sliver lapper; one Mason, six head, ribbon lapper; one Mason, six head, comber.

One Whitin sliver lapper; one Whitin four head, ribbon lapper; one eight head, Whitin high speed comber.

Railway Heads.—One Saco & Pettee railway head, with evener motion, stop motion and metallic rolls; one Mason railway head, with evener motion, stop motion and metallic rolls.

Drawing Frames.—Two Saco & Pettee drawing frames, four deliveries, stop motions, metallic rolls; one Mason draw frame, four deliveries, stop motions and metallic rolls.

Fly Frames.—One Saco & Pettee 12 by 6 inch, 40-spindle slubber, with latest differential motion; one Saco & Pettee 8 by 4 inch, 60-spindle intermediate roving frame, with latest differential motion; one Saco & Pettee 6 by 3 inch, 80-spindle, fine roving frame, with latest differential motion; one Woonsocket 6 by 2½ inch, 96-spindle jack roving frame, with Daly's improved differential motion.

Ring Spinning.—One Saco & Pettee combination warp and filling ring spinning frame, 128 spindles; one Mason combination warp and filling ring spinning frame, 112 spindles;

two Fales & Jenks combination warp and filling ring spinning frames, 80 spindles each, designed for spinning fine counts; two Whitin combination warp and filling ring spinning frames, 80 spindles each.

Mules Spinning.—One Mason self-acting spinning mule, 120 spindles, 1¾-inch gauge, with all latest improvements.

Spooling.—Two Draper spoolers 40 spindles each; one Saco & Pettee spooler, 72 spindles; one Barber-Coleman automatic knotter, one Byrd automatic knotter.

Twisting.—One Draper combination wet and dry twister, 48 spindles; two Fales & Jenks wet twisters, combination filling and taper top wind; 70 spindles each.

Winding.—One universal cone and tube winder.

Reeling.—One D. A. Tompkins adjustable reel, 50 spindles; one Draper 54-inch reel, 50 spindles.

Miscellaneous Equipment.—Fairbanks scales; model of Daly's differential motion (complete); models of Campbell's ball bearing rolls; Brown & Sharpe roving reel; Brown & Sharpe yarn reel; Brown & Sharpe scales and weights; Charlotte Supply Co's. skein tester; model of "Eagle" cotton gin; Fred B. Howe twist counter.

Division of Weaving and Designing

The equipment of this division is as follows:

Winding.—One W. W. Altemus & Son bobbin winder; one Atwood-Morrison Company bobbin winder; one Geo. W. Payne & Company skein winder.

Dressing.—One Davis & Furber dresser; one Davis & Furber jack spooler.

Warping.—One Draper section warper; one Draper ball warper.

Beaming.—One Entwistle beaming machine.

Jacquard Card Cutting.—One John Royle, French index, foot-power card-cutter.

Hand Looms.—Seventeen 15-inch hand looms with 4x4 box motions and 30 harnesses shedding engines, arranged for four beam work.

Power Looms.—One 40-inch Northup loom fitted with 16-harness Stafford dobby; one 28-inch Northop loom with steel harness warp stop motion; one 36-inch Mason Gingham loom with 4x1 box motion; one Mason 44-inch loom with Stafford 20-harness dobby; one Mason 40-inch cam loom, arranged for 2, 3, 4 and 5 harnesses; one Stafford 30-inch fancy cotton loom with 20-harness dobby and leno attachment; one Stafford 30-inch loom with Halton 624-hook, double life, single cylinder jacquard; one Crompton & Knowles 40-inch "Gem" loom, with 30-harness dobby and 4x4 box motion; one Crompton & Knowles 26-inch fancy towel loom with 16-harness dobby and 3x1 box motion; one Crompton & Knowles 64-inch loom, 4x1 box motion, fitted with 624-hook, double lift, single cylinder jacquard, tied for weaving damask; one Whitin 40-inch cam loom arranged for 2, 3, 4 and 5 harnesses; one Whitin 40-inch fancy cotton loom with 20 harness dobby; one Whitin heavy pattern duck loom; one Crompton & Knowles 30-inch fancy cotton loom with 16-harness dobby and 2x2 box motion; two Kilburn & Lincoln 38-inch cam looms; one Knowles 30-inch loom with 416-hook, single lift, swing cylinder jacquard tied for weaving napkins; one 28-inch "E" model Draper loom with steel harness stop motion; one 28-inch "E" model Draper loom with two thread warp stop motion; one 28-inch "E" model Draper loom with Lacy top rig and tape selvage motion, arranged for 2, 3, 4 and 5 harness work; one 28-inch "K" model Draper loom with 20-harness dobby, double filling fork and feeler, arranged for two beam work; one Crompton & Knowles 4-bank, 4-shuttle ribbon loom, mounted with 416 hook double lift jacquard.

Division of Textile Chemistry and Dyeing

The work in textile chemistry and dyeing is carried on in an experimental laboratory and a practical dyehouse. These are equipped with the necessary apparatus and chemicals for instruction in organic chemistry, scouring, bleaching, dyeing, mercerizing, printing, etc.

The experimental laboratory is fitted with appropriate work-tables, furnishing accomodations for 64 students, working by detachments. Each table is supplied with the necessary arrangements for gas and water, and drawers and lockers in which may be stored apparatus and unfinished experiments.

The Dye House contains nine dye vats, four fitted with copper heating coils, one for peroxide bleaching; one Schaum & Uhlinger self-balancing hydro-extractor; one model Vacuum dyeing machine with steam engine attached; one Birch sample dyeing machine with electric motor attached; one calico printing machine; one mercerizing machine for yarn; one steaming and ageing box; one Butterworth jigger; three jacketed copper kettles.

Department Library

For the use of students and instructors, a reading room in the Textile building has been fitted up and is furnished with some of the more important books of reference relating to the textile industry, and also with the leading periodicals relating to the subject. All journals and periodicals are contributed. There is also in this room an exhibit of the work done by the students in the different divisions of the department, and an equipment of old machinery, illustrating the methods used before the introduction of power machinery. The room is open every week-day throughout the session.

The Printery

The printery equipment is as follows: One Babcock regular drum cylinder printing press, 22 by 27 inch bed; two Chandler & Price job presses; one Chandler & Price cutter; one Morrison stitcher; two perforators; one letter folder; two Hammond cabinets; two imposing stones; one No. 1 model linotype machine with supply of matrices for same; a supply of type, furniture, etc. All the machines are driven by individual motors. The college reports, bulletins and miscellaneous stationery are printed here, much of the work being done by students.

Gymnasium

A large room in the basement of the Agricultural Hall has been set aside by the Board of Trustees for a gymnasium. The room is equipped with carefully selected apparatus including horizontal bars, parallel bars, spring boards, traveling rings, flying rings, climbing rope, horse, buck, low parallels, trapezes, pulleys, weights, floor mats and take-off board.

The gymnasium is to give year-round training to those students interested in athletics, so that they will keep in good condition for work on the athletic teams. It is also designed for students who do not take other forms of exercise, but depend on the gymnasium for their only means of physical development. The work is not required but is enjoyed by a large number of students. A member of the faculty superintends the work and directs the exercises.

Museum

On the first floor of the Agricultural Hall is the Museum of Natural History. It is furnished with large cases containing the collections of the geologist, the entomologist, the botanist, the agriculturist, the agronomist, and the horticulturist. These exhibits are of especial interest to people of the State because they embrace the minerals and rocks of South Carolina; birds of South Carolina; insects common to the State, especially those injurious to vegetable life; fungus diseases of plants; and grains and fruits of the State. There are also objects of historical interest on account of their association with John C. Calhoun and Thomas G. Clemson.

Hospital

The Hospital, located about a quarter of a mile from the barracks, is a wooden building, especially designed for the purpose. It is lighted by electricity, and has a thorough sewerage system. The hospital is in the immediate charge of the surgeon, who is assisted by an experienced matron and nurses, thus insuring the best personal attention to each patient.

Laundry

The Laundry is a brick building especially constructed and fitted with the improved machinery of a modern steam laundry, and is operated exclusively for the students.

Library

In the main building is a series of rooms especially constructed for the use of the library. There are now upon the shelves 10,788 volumes, classified under the various heads of literature, history, biography, science and reference books. In addition to these in the general library, there are 1,493 volumes in the Experiment Station and department libraries of the College. There are also about 5,700 government publications and 200 reference books, together with about 9,000 pamphlets. The library is supported by an annual appropriation, and the number of books is added to each year.

In connection with the library there is a reading room in which the students have access to 35 of the leading monthly periodicals, 14 weekly, the principal daily papers of the State and many of the county papers.

The Clemson Relics

A collection of thirty-seven oil paintings, collected by Mr. Clemson, chiefly in Holland, together with a number of additional portraits, may be seen in the reception room in the main building.

The Calhoun Relics

Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the College.

Residences and Hotel

The Calhoun Mansion, the former residence of John C. Calhoun, is kept in honor of his memory, in accordance with the provisions of Mr. Clemson's will.

Residences.—Ten two-story brick buildings, nine six-room cottages, thirty-five smaller houses, all situated on the campus, furnish residences for professors and other officers of the College.

Clemson Club Hotel.—The College Hotel, a frame building with two eight-room annexes, situated on a hill overlooking the campus, is operated by several members of the Faculty. In addition to furnishing a home for the members of the club, it is open the entire year to a limited number of transients.

COLLEGE INSTITUTIONS

Religious Exercises

Chapel Services.—There is preaching in Memorial Hall every Sunday morning by ministers of the different denominations, and chapel services are conducted every morning by a resident minister or a member of the faculty. All students are required to attend these exercises unless specially excused.

Sunday School.—A Sunday school at which attendance is voluntary, also meets every Sunday morning, and students are encouraged and urged to attend.

Young Men's Christian Association

The College Young Men's Christian Association is fundamentally a Christian organization, with four great objects, which are as follows: To lead students to become disciples of Jesus Christ as their divine Lord and Saviour; to lead them to join the Church; to promote growth in Christian faith and character, and to enlist and train them in Christian service.

At Clemson the association has supervision and direction of all the religious activities of the College except the Sunday school, the Sunday morning services, and the daily chapel exercise. The activities include; a religious service on Sunday evening, a mid-week prayer-meeting on Wednesday evening, daily prayer service just after breakfast, and a series of special evangelistic meetings from time to time. In November the Week of Prayer is appropriately observed conjointly with the college men of America.

The Bible department offers three courses of study; one on the life of Christ; one on the life of St. Paul; and one in the Old Testament. These classes meet on Sunday evening and are led by students, who are prepared for this work through training classes led by members of the faculty, the local ministers and the general secretary. During the past year 390 cadets were enrolled in 33 of these group classes. This department also conducts Bible institutes and special training conferences. A week's series of Bible lectures, delivered by some recognized Biblical scholar, does much to stimulate study and research in the Christian religion.

The department of missions has general supervison of all the missionary activities of the College, and, like the Bible department, is pursuing a broad educational policy. The conditions and needs of the non-Christian world, and how these conditions are being improved and the needs supplied, are brought to the attention of the students through addresses, literature, and study classes. A small but select library is kept in the office of the general secretary, where it is always accessible to the members.

This year the Association is uniting with two other College Associations in the support of a Missionary, Mr. E. B. Barnett, in the Foreign field.

The property of the association, the significance of membership, the social activities, the summer conferences, and the rules for the use of the tennis courts, cannot be given in detail here.

In order to prosecute this work intelligently it has been found necessary and desirable to maintain a secretary, who has general supervision of all the work of the organization. This secretary has no official connection with the Colleege, either as a disciplinarian or instructor; neither is he a College preacher. He is an older and more experienced student, employed by the students as their counsellor, their advisor, and the director of their religious work.

All students should know the secretary personally, for his unique position enables him to be of service to students in many ways. Owing to the change which has been made in the location of the Y. M. C. A. quarters this year, the Secretary will be found in one of the rooms in the new story of barracks No. 1. Students are welcome to his room at all times; and he is there for their convenience.

Parents and students desiring further information should write to the General Secretary, R. L. Sweeney, at the College, or to Cadet D. L. Cannon, 283 S. Liberty St., Spartanburg, South Carolina.

Care of the Sick

The Surgeon is one of the regular officers of the College, and his special duty is to look after the health of the students. He also has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a regular appointed time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the College Hospital. In case of necessity students are allowed to consult the Surgeon at any time, or send for him, as may be required.

The Surgeon cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. However, they may rest assured that they will be promptly notified of sickness of any consequence. In case of serious illness the Surgeon will telegraph them.

Student Labor

The College assumes no obligation to furnish employment to students for wages. Considerable manual labor, however, is necessary to carry on the various departments of the College; and when practicable, students are employed in this work. The number applying for work always exceeds the number that can be employed, and those who enter College late in the session are at a special disadvantage in securing work.

No student is allowed to undertake work that interferes with his College course.

Literary Societies

Three literary societies, the Calhoun, the Columbian, and the Palmetto, furnish a valuable supplement to the work of the College. These societies afford facilities for practice in debate, oratory, declamation and essay writing, and their members acquire valuable knowledge of parliamentary law and usage. The meetings are held weekly, on Saturday evenings. An annual contest is also held by each society, at which there are debates, orations and declamations by the students.

On these occasions a representative is chosen from each society to enter the contest for the Trustees' Medal at commencement. The societies themselves also award medals annually to the best debater, orator, and declaimer.

The societies occupy halls in the main College building, which are furnished with carpets and opera chairs, and are maintained entirely by the students. A small initiation fee is charged, and small monthly dues to meet running expenses. All students are advised to join one of these societies.

State Oratorical Contest

The literary societies also send a representative to the annual contests of the South Carolina Intercollegiate Oratorical Association, which includes the following institutions: Furman Uuniversity, Wofford College, Clemson Agricultural College, Presbyterian College of South Carolina, Erskine College, Newberry College, South Carolina Military Academy, and University of South Carolina.

Publications by the Students

The Clemson College Chronicle, a monthly magazine designed to encourage literary work among the students, is published jointly by the literary societies during the College session.

An **annual**, an illustrated volume, is published under the auspicies of the senior class.

There is also **The Tiger**, published weekly, which is devoted largely to athletics.

The Science Club

The Clemson College Science Club was organized for the purpose of promoting knowledge of the progress of the natural sciences, theoretical and applied. Public meetings are held every month, at which subjects of general scientific interest are discussed by members of the faculty and others.

The Clemson Biological Club

This club is open to members of all the faculties of Clemson College and to all students. Its object is to stimulate interest in biological subjects, and to keep its members fully abreast of current biological work and thought.

A regular meeting is held once each week in the Agricultural Hall.

Lecture Course

A lecture course, employing some of the best talent on the American platform, is provided every session. These lectures are delivered in Memorial Hall, at a cost to students of one dollar for the course. During the session of 1911-1912 the following lectures and concerts were given:

1 Dudley Buck Company.
2 The Hussars.
3 Leland Powers.
4 Le Brun Opera Company.
5 George D. Alden.
6 Good Fellows Company.
7 John Davey.
8 Dr. Taylor of Boston.
9 Toronto Male Quartet.
10 Dr. Gunsaulus of Chicago.

The Cadet Exchange

The College maintains a book and supply store known as the Cadet Exchange, where students may purchase text-books, drawing instruments and other student supplies at reduced prices.

College Athletics

It is the policy of the College to sanction and encourage athletics so long as they do not interfere with studies and other duties. Football, baseball and track are the most popular sports, and it is assumed that parents are willing for their sons to participate in these games unless the President is definitely notified to the contrary. The athletic teams are permitted to take a few trips each season, usually on Saturday, to play intercollegiate games. The College is a member of the Southern Intercollegiate Athletic Association (S. I. A. A.,) and of the South Carolina Intercollegiate Athletic Association (S. C. I. A. A.)

Athletic Council.—The Southern Intercollegiate Athletic Association has placed the athletic interests at each college under the supervision of an athletic Council, consisting of members of the Faculty and the student body. This council consists of nine members—two members of the Faculty, the president and the secretary-treasurer of the local athletic association, elected by the students, and three members of the Faculty chosen by the Faculty, and the four class presidents.

Intercollegiate Athletics.—For the regulation of intercollegiate athletics, the Faculty has adopted the following rules:

1... **Monthly Standing.**—Any student who fails on more than two subjects during a collegiate month shall not be allowed to participate in match games during the ensuing month. If, by reason of absence or other cause, a grade on the month's work is lacking, the instructor shall give a temporary grade based upon the work done, and this temporary grade shall be used in determining the student's athletic standing until the regular grade is available.

2. **Sessional Standing.**—No student who is found to be deficient in more than one subject for a term shall be allowed to play in any match game during the college year. Change from one course to another, or from a regular to an irregular or special course, shall not interfere with the operation of this rule.

3. **Student Taking Class Over.**—(a) That a student taking a class over be not allowed to play football who has any monthly failure in any subject.

(b) A student taking a class over shall not be allowed to play unless he passes in the first and second terms without any failures and is otherwise eligible.

4. **Graduate Students.**—No graduate student shall participate in any match game unless he is taking at least twenty hours per

week of graduate work; that is, work of a higher grade than is given in the regular College courses. Such student shall also conform to the rules of class standing as set forth in Sections 1 and 2. Further, no graduate student of more than one year's standing shall participate in any match game.

5. **Irregular or Special Student.**—No irregular or special student shall be allowed to represent the College in any match game unless taking at least twenty-four hours' work per week, of which not less than twelve hours shall be "theoretical" work.

6. No football player who leaves College before the end of the first term, except for reasons satisfactory to the Faculty Athletic Committee, shall be allowed to participate in match games during the next three College terms.

7. It shall be the duty of the Faculty Athletic Committee to see that the foregoing rules and regulations are strictly enforced

8. No team shall be allowed to leave the College grounds to participate in any match game unless accompanied by a member of the Faculty, who shall be responsible to the Faculty for the conduct of the players and coaches while away from the College. Such representative shall be appointed by the chairman of the Faculty Athletic Committee, and his expenses shall be included in the expenses of the trip.

THE SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

The Agricultural Experiment Station of South Carolina is a department of Clemson College. The organization of the station together with the officers of the staff is given on page 13 of this catalog. The experiment station at present consists of the main station which is located at Clemson and two sub-stations, one in the coast region located at Summerville and one in the Peedee section located at Florence. The main offices and laboratories of the station occupy the second floor of the Agricultural Hall, while the station experimental farm, consisting of about 200 acres is located east of and adjoining the College campus. The investigations dealing with the fundamental principles of agricultural sciences and with the application of such principles to practical agricultural operations are carried on in the laboratories and on the experiment station farm at Clemson. The experiments looking to the adaptation of such scientific data accumlated here and elsewhere to the conditions peculiar to certain sections of the State are carried on at the sub-stations and at branch laboratories established in certain sections of the State for this purpose.

It is the aim of the experiment station to carry on research work on problems which have a direct practical bearing on the agriculture of the State. With this end in view elaborate experiments relative to the best methods of procedure under various conditions with the principal plants and animals have been undertaken. As progress is made with such experiments the results obtained are given out to farmers in the form of bulletins, circulars and personal letters. Since the establishment of the Station 160 such bulletins have been published and sent free to every farmer in the State who desires them.

Aside from the reasearch work and the publication of results obtained from such research the experiment station performs various other duties. Among these might be mentioned the entomological and pathological inspection work which aims to protect the farms, orchards and gardens of the State against the introduction of injurious insects and diseases; the biological and soil survey of the State; and the co-operative experimental work carried on with hundreds of farmers in the State. The technically trained experts of the station staff are regarded as authority on their several specialties and they are constantly giving out information relating to the various lines of agricultural endeavor. More than fourteen thousand personal and circular letters are written annually to residents of the State giving technical information to individuals on special subjects. The station staff also aids in disseminating agricultural knowledge by co-operating with the extension division of the College in holding farmers institutes and by meeting with the farm demonstration agents and giving to them technical information which they in turn carry through the demonstration work direct to the farmers.

Close co-operation is maintained with the various research bureaus of the National Department of Agriculture and with the departments of the College. The laboratories are always open to the inspection of the students and other people of the State. The same is true of the experiment station farm. There is always opportunity for a limited number of students to secure work in the various divisions of the station and to assist in the research work carried on by the members of the station staff.

All publications of the experiment station are sent free upon request to any resident of the State. Requests for these should be addressed to J. N. Harper, Director, Clemson College, S. C.

PUBLIC SERVICE

In addition to the usual teaching work, Clemson College expends over $100,000 annually for public service along the following lines:

Fertilizer Inspection and Analysis—

The work of fertilizer inspection and analysis is under the supervision of the Board of Control consisting of Hon. W. D. Evans of Cheraw, S. C., Chairman; Richard I. Manning of Sumter, and S. T. McKeown of Cornwell. The work of inspection is under the immediate supervision of H. M. Stackhouse, Secretary of the Board of Control.

For purposes of inspection, the State is divided into fourteen districts, each with one inspector and a Chief Inspector, W. B. West, to supervise the field work.

The work of analysis is carried on by the special corps of expert chemists attached to the Chemical Department, and under the supervision and directions of Dr. R. N. Brackett, Chief Chemist.

The annual cost of this inspection and analysis is about $35,000.

Agricultural and Textile Scholarships—

The College has maintained 167 four year Agricultural and Textile scholarships, and next year will add fifty-one one year Agricultural scholarships. Each scholarship is worth $100 and free tuition. The cost of these scholarships is paid out of the fertilizer tax,—as the State makes no appropriation therefor.

The annual cost of these scholarships, including advertising, expense of holding examinations, etc., will be about $23,000.

Veterinary Inspection and Tick Eradication—

This interest is under the supervision of a Committee of the Board of Trustees composed of Hon. W. D. Evans of Cheraw, S. C., Chairman; Hon. E. T. Hughes of Marion, and Dr. R. H. Timmerman of Batesburg.

The work is carried on by the Veterinary Division of the Agricultural Department. Dr. M. R. Powers, head of the Division, is State Veterinarian. The work includes the control of contagious diseases, eradication of the cattle tick, which transmits Texas fever, and the supervision of shipments of live stock into the State. Much of this work is required by legislative enactment, but the cost comes out of the regular income of the College, and amounts to nearly $16,000 a year.

Entomological and Pathological Inspection—

This work is carried on under the direction of the State Crop Pest Commission, having the same personnel as the Veterinary Committee, of which Hon. W. D. Evans of Cheraw is the Chairman. This Commission is selected by the Board of Trustees from its members.

The State Entomologist is Prof. A. F. Conradi, head of the Division of Entomology, and the State Pathologist is Prof. H. W. Barre, head of the Division of Botany and Forestry.

The work of these officers consists in the control of contagious plant diseases and insect pests. The State Entomologist has also supervision of all nursery stock sold within the State.

The cost of these lines of work is approximately $3,200.

Division of Extension Work and Farmers' Institutes—

This Division, together with the Farmers' Co-operative Demonstration Work conducted jointly by the U. S. Department of Agriculture and the College, is under the supervision of Prof. W. L. English.

The Extension Work includes farmers' institutes, demonstration trains, correspondence courses, press bulletins, spraying and orchard demonstration, etc.

The College expends for Extension Work between ten and twelve thousand dollars a year.

Farmers' Co-operative Demonstration Work—

As above stated, this work is carried on as part of the work of the Extension Division. The State is divided three districts, each presided over by a District Agent, practically every county there is a local agent who look the crop demonstrations. Under the direction of th agents, farmers are induced to plant certain acreage an vate in accordance with expert directions.

The local agents also assist the College in its v other lines of public service.

The College contributes $10,000 annually to carrying on the demonstration work in South Carolina.

The Boys' Corn Club Work—

The Boys' Corn Club Work is also carried on jointly by the U. S. Department of Agriculture, and the College, as a feature of the demonstration work. Mr. C. B. Haddon, under the general direction of Prof. W. L. English, is in charge of this particular line of work.

About $1,500 per year is expended by the College in this work.

Co-operative Experimental Work—

The Co-operative Experimental Work is carried on under the supervision of Prof. J. N. Harper, Director of the Agricultural Department and Experiment Station. About 200 farmers are enrolled in this important line, which includes a repetition of many of the experiments conducted at the parent Experiment Station located at the College. The demonstration work seeks to apply known and thoroughly tried and approved methods to farming, but the co-operative experimental work is intended to verify new facts and laws under the various soil and climate conditions in South Carolina.

The cost of conducting this work is approximately $1,000 per annum.

Branch Experiment Stations—

In order to re-inforce the main Experiment Station located at the College, two additional branch stations have already been established, one at Drainage in the costal plain,

other near Florence in the Pee Dee Section. One other
ocated in the Sand Hill Section of the State.
e stations are devoted primarily to experimental
hey will also form centers of dissemination for the
ion which the College has to give to the people. This
College expended $20,000 in the purchase of land for
e Dee Station, and $2,700 for the Coast Station, which is otherwise practically self-supporting.

Miscellaneous—

In addition to the above regular lines of activity, the College manufactures at cost the South Carolina flag in a number of different sizes, makes annually an exhibit at the State Fair at a cost of approximately $1,000, and expends a small amount for Textile instruction in some of the neighboring mill villages.

Clemson College Alumni Association

D. H. HENRY, '98, President.
R. E. LEE, '96, First Vice-President.
H. C. TILLMAN, '03, Second Vice-President.
B. H. RAWL, '00, Third Vice-President.
H. W. BARRE, '05, Secretary.
J. E. HUNTER, '96, Treasurer.
D. B. PUERIFOY, '07, Alumni Orator of 1912.

There are Alumni Chapters in each of the following cities:—

New York, N. Y.
Pittsburgh, Pa.
Washington, D. C.
Schenectady, N. Y.
Greenville, S. C.
Charleston, S. C.
Rock Hill, S. C.
Pittsfield, Mass.

Register of Graduates and Former Students

A Register of Graduates and Former Students will be published as a separate bulletin. Graduates, former students, and friends of the institution are requested to co-operate in making this record as nearly complete as possible. The following is the information desired: name, address, year of graduation, or of attendance at the College, and occupation. This should be sent to the Secretary of the Clemson College Alumni Association.

GRADUATES 1910-1911

Degree of Bachelor of Science with Diploma

he names of the County and City are the same the name
City is not repeated, only the street address is given.)

and Course	County	Residence
ord, T. L. Text.	Marion	Marion
F. H. Agri. II	Barnwell	Allendale
man, L. B. Agri. I	Horry	Galivant's Ferry
Arthur, M. W. Mech. Elec.	Union	Union
Beaty, D. C. Agri. I	Union	Union
s Beatty, H. C. Text.	Georgetown	Georgetown
Boone, L. D. Agri. III	Orangeburg	Rowesville
Britt, S. L. Agri. II	Abbeville	McCormick
s Cassells, G. T. Agri. II	Fairfield	Cassels
s Chapman, A. D. Agri. I	Pickens	Liberty
s Connelly, W. R. Text.	Chester	Chester
Cooper, H. P. Agri. II	Fairfield	Blythewood
s Crawford, J. T. Text.	Laurens	Ware Shoals
Davis, E. I. Mech. Elec.	Greenwood	Troy
Deason, B. H. Agri. I	Abbeville	McCormick
s Dew, J. A. Agri. I	Greenville	Simpsonville
s Dukes, O. O. Agri. II	Dorchester	St. George
s Eagerton, H. C. Agri. I	Berkeley	St. Stephens
s Epps, M. H. Text.	Florence	Timmonsville
Fant, G. C. Chem. Geol.	Anderson	Anderson
s Fizer, J. R. Text.	Orangeburg	Branchville
s Folk, B. P. Agri. II	Newberry	Pomaria
s Foster, W. W. Text.	Cherokee	Pacolet
s Freeman, R. W. Agri. I	Darlington	Lamar
s Fulmer, H. Agri. II	Saluda	Batesburg
Furtick, G. C. Mech. Elec.	Calhoun	Sandy Run
Garner, G. D. Text.		Eatonton, Georgia
s Garrett, W. C. Text.	Pickens	Pickens
s Gettys, B. W. Agri. II	Kershaw	Lugoff
Gillam, C. R. Civil	Bamberg	Denmark
Gilmer, F. V. Mech. Elec.	Greenville	302 Frank
Gilmore, J. L. Agri. I	Orangeburg	Holly Hill
Ginn, W. N. Mech. Elec.	Hampton	Varnville

NOTE: s—Indicates Scholarship Student

Name and Course	County	
Goodman, W. S. Civil	Oconee	C
s Goodwin, J. A. Agri. II	Greenville	
s Graham, O. H. Agri. II	Williamsburg	
Hanckel, W. H. Agri. II	Charleston	
Hardin, L. H. Mech. Elec.	Cherokee	L
Harris, B. B. Agri. II	Anderson	Pe
Harrison, J. W. Mech. Elec.	Oconee	Wa
s Harrison, L. C. Agri. III	Oconee	Walha
s Haskell, L. C. Agri. III	Abbeville	Abbeville
Haynsworth, W. M. Agri. II	Florence	Florence
Head, N. O. Civil	Aiken	Aiken
s Henderson, W. N. Agri. III	Newberry	Blairs
s Jenkins, E. S. Agri. I	Charleston	15 Thomas St.
s Jenkins, Jno. E. Agri. II	Richland	Columbia 819 Woodrow
Jenkins, Joe. E. Agri. II	Berkeley	Pinopolis
s Jeter, F. H. Agri. I	Union	Santuc
s Keith, J. B. Agri. I	Florence	Timmonsville
Kirby, J. E. Civil	Spartanburg	Converse
s Knight, B. T. Text.	Chesterfield	Cheraw
s Knox, J. S. Agri. I	Oconee	Westminster
s Lachicotte, G. E. Agri. II	Georgetown	Waverley Mills
Lawrence, B. F. Mech. Elec.	York	Filbert
Lawton, J. K. Chem. Geol.	Hampton	Brighton
s Lindler, S. L. Agri. II	Lexington	Gilbert
s Lykes, C. S. Agri. III	Richland	Lykesland
s Lykes, F. W. Text.	Richland	Lykesland
Martin, J. M. Civil	Marion	Marion
McCord, G. L. Chem. Geol.	Abbeville	Abbeville
McCord, O. P. Mech. Elec.	Greenwood	Hodges
McCown, F. O. Mech. Elec.	Anderson	Anderson
McCreary, E. A. Text.	Aiken	Aiken
McLure, L. C. Mech. Elec.	Chester	Chester
s Mickle, W. W. Agri. II	Kershaw	Camden
Milling, J. C. Mech. Elec.	Greenwood	Greenwood
Parker, F. F. Mech. Elec.	Spartanburg	Roebuck
s Rast, F. M., Jr. Agri. I	Calhoun	Cameron
Redden, J. E. Civil	Anderson	Honea Path
s Riley, J. A. Agri. I	Bamberg	Denmark
Rogers, F. E. Mech. Elec.	Darlington	Darlington
Salley A. M. Agri. I	Orangeburg	Orangeburg

NOTE: s—Indicates Scholarship Student

GP	County	Residence
.. Agri. I	Sumter	Hagood
Text.	Anderson	Autun
. G. Mech. Elec.	Greenville	Greenville
J. P. Agri. III	Beaufort	Port Royal
W. E. Agri. III	Bamberg	Bamberg
..er, E. L. Chem. Geol.	Darlington	Society Hill
..bin, L. P. Mech. Elec.	Barnwell	Barnwell
Walker, R. H. Mech. Elec.	Barnwell	Appleton
s Wall, M. W. Agri. I	Marion	Eulonia
s Wiggins, W. M. Agri. I	Marion	Mullins
Williams, T. D. Mech. Elec.		Matthews, North Carolina
Wolfe, R. S. Agri. I	Orangeburg	Orangeburg
Woodward, H. M. Civil	Barnwell	Barnwell
Wyndham, L. T. Civil	Berkeley	Cordesville

NOTE: s—Indicates Scholarship Student

STUDENTS 1911-1912

SENIOR CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
s Adams, H. A. Jr. Text.	Edgefield	Meriwether
Adams, T. C. Text.	York	Rock Hill
s Ancrum, J. N. Agri. III	Kershaw	Camden
Anderson, H. W. Text.	Colleton	Walterboro
Bacot, B. R. Civil	Charleston	55 Trodd
s Bates J. A. Agri. III	Calhoun	St. Matthews
Bell, T. E. Agri. II	Lee	Hartsville
Blackwell, J. W. Jr. Mech. Elec.	Darlington	Darlington
Brodie, O. B. Civil	Lexington	Leesville
Brown, A. J. Mech. Elec.	Pickens	Liberty
Byars, G. W. Agri. I	Cherokee	Gaffney
Byrd, W. M. Mech. Elec.	Darlington	R. No.3, Darlington
Caldwell, Jno. C. Civil	Spartanburg	Campobello
s Caldwell, R. D. Agri. III	Cherokee	Blacksburg
Connor, S. M. Agri. I	Colleton	Smoaks
s Cooper, M. L. Agri. I	Fairfield	Blythewood
s Covington, H. S. Agri. II	Marlboro	Bennettsville
Crawford, J. R. Civil	Laurens	Clinton.
David, L. S. Civil	Greenville	141 James
Davis, H. S. Mech. Elec.	Charleston	135 Coming St.
Dreher, J. M. Chem. Geol.	Lexington	Irmo
s Evans, T. S., Jr. Agri. I	Chesterfield	Cheraw
s Ezell, J. F. Agri.	Spartanburg	Cherokee
Ezell, W. D. Agri. III	Spartanburg	Cherokee
Fant, A. P. Agri. I	Anderson	Anderson
s, C. B. Agri. I	York	Fort Mill
, C. S. Agri. I	Bamberg	Denmark
man, H. A. Agri. III	Laurens	Honea Path
e, J. H. Mech. Elec.	Union	Union
hin, R. W. Agri. I	Orangeburg	Vance
rap. L. C. Agri. II	Pickens	Pickens
dfinch, A. K. Text.	Horry	Conway
ray, W. R. Agri. I	Laurens	Gray Court

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s Hall, C. M. Agri. I	Anderson	Anderson
s Hall, E. E. Agri. I	Lancaster	Fort Mill
Hamlin, E. E. Civil	Anderson	228 W. Franklin St.
s Hardin, D. T. Agri. II	Abbeville	Lowndesville
s Hardy, G. L. Text.	Edgefield	Johnston
Harris, J. G. Agri. II	Laurens	R. No. 1 Owings
Hartley, J. E. Mech. Elec.	Lexington	Batesburg
s Harvey, H. W. Agri. I	Berkeley	Pinopolis
s Hayden, C. J. Agri. III	Orangeburg	R. No. 2 Cope
s Hayden, J. H. Agri. II	Orangeburg	R. No. 2 Cope
s Hayes, W. H. Agri. I	Spartanburg	R. No. 2, Pacolet
Haynesworth, M. S. Mech. Elec.	Darlington	Darlington
s Hearsey, G. J. Agri. III	Marlboro	Blenheim
Hill, D. B. Mech. Elec.	Bamberg	R. No. 1, Bamberg
s Hutson, H. M. Agri. III	Aiken	1616 Colleton Ave.
Jacobs, O. Agri. III	Newberry	Newberry
Jennings, H. C. Agri. I	Orangeburg	R. No. 2 Cope
s Jeter, R. M. Agri. III	Richland	R. No. 4, Columbia
Josey, E. P. Agri. II	Darlington	R. No. 4, Lamar
Kaigler, H. O. Civil	Lexington	R. No. 3, Gaston
Kennerly, H. S. Agri. I	Greenwood	1026 Main St.
LaMotte, W. R. Mech. Elec.	Darlington	597 Broad St.
s Lazar, J. T. Agri. I	Barnwell	Allendale
s Latimer, D. L. Text.	Abbeville	Lowndesville
s Lawton, J. G. Agri. III	Hampton	Garnet
Lindler, J. R. W. Civil	Lexington	Gilbert
Littlejohn, E. G. Mech. Elec.	Union	Jonesvile
McIntosn, R. J. Mech. Elec.	Richland	1345 Main, Columbia
Hall, R. R. Mech. Elec.	Oconee	Clemson College
Mays, E. D. Agri. I	Greenwood	1120 S. Main
s McCrary, O. F. Agri.	Greenville	Bates St.
McIntyre, D. Mech. Elec.	Marion	Marion
Miller, S. A. Text.	Lexington	Columbia
Mitchell, J. E. M. Mech. Elec.	Charleston	Edisto
Owens, B. F. Agri. II	Barnwell	Dunbarton
s Pennell, B. F. Agri. III	Abbeville	Level Land
Perry, W. G. Civil	Greenville	140 James
Petrie, W. C. Mech. Elec.	Spartanburg	Spartanburg
Privette, W. H. Agri. II	Darlington	Darlington
s Prosser, H. T. Agri. I	Williamsburg	Leo

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Redfern, T. C. Agri. II	Oconee	Clemson College
s Reid, T. R. Agri. II	Greenville	Campobello
s Risher, F. W. Agri. I	Colleton	Smoaks
s Risher, T. R., Jr., Agri. III	Colleton	Round
s Rowell, N. K. Agri. I	Marion	Centenary
Ross, F. L. Agri. II	Cherokee	Gaffney
Simpson, J. A. Mech. Elec.	Anderson	Honea Path
s Small, A. G. Agri. I	Horry	Galivant's Ferry
Sompayrac, E. A. Mech. Elec.	Darlington	Society Hill
s Stanton, C. H. Agri. III	Marlboro	Clio
Stribling, J. N. Civil	Oconee	Walhalla
Tison, E. W. Mech. Elec.	Hampton	Robertville
s Tompkins, D. Text.	York	Rock Hill
Truesdale, B. J. Mech. Elec.	Kershaw	Kershaw
s Ulmer, R. F. Agri. III	Hampton	Brunson
Wakefield, J. B. Text.	Abbeville	Antreville
s Wessinger, J. H. S. Agri. II	Lexington	Lexington
s Workman, J. M. Text.	Sumter	Mayesville
s Yates, L. F. Text.	Lee	Camden
s Zerbst, G. H. Agri. III	Charleston	70 Pitt St.

JUNIOR CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Alexander, R. A. Agri. I	Chester	Chester
Anderson, G. M. Agri. II	Abbeville	Antreville
Anderson, L. K. Mech. Elec.	Spartanburg	Clifton
s Auld, I. D. Agri. I	Charleston	Mt. Pleasant
Banks, W. D. Agri. I	Calhoun	St. Matthews
Barnwell, J. W. Jr., Civil	Charleston	48 S. Bay
Berry, M. D. Mech. Elec.	Greenville	328 Douthit St.
Blackmon, L. R. Mech. Elec.	Lancaster	Kershaw
Boggs, J. K. Civil	Pickens	Liberty
Bomar, H. J. Mech. Elec.	Spartanburg	221 Kennedy
s Bouson, F. W. Agri. III	Charleston	11 Wentworth
s Bowers, W. E. Agri. III	Kershaw	Kershaw
s Boylston, H. G. Agri. I	Barnwell	Elko

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Britt, W. B. Mech. Elec.	Abbeville	McCormick
s Brodie, J. E. Agri. III	Aiken	Earle
Brown, S. K. Mech. Elec.	Florence	Hyman
s Cannon, D. L. Agri. III	Spartanburg	283 S. Liberty
s Carpenter, P. M. Agri. I	Greenville	R. No. 2 Marietta
Coles, M. Agri. I		Jacksonville, Fla.
Davis, J. B. Civil		Durant, Oklahoma
Davis, R. F. Text.	Greenwood	Troy
s Davis, T. F. Agri. II	Richland	Killian
Dunlap, C. K. Civil	Anderson	Belton, Bx. 163
Erwin, J. O., Jr. Text.	Spartanburg	E. Main
s Evans, A. J., Jr. Civil	Dillon	Dillon
Fant, R. W. Text.	Anderson	River St.
s Faris, C. G. Agri. I	York	R. No. 1 Fort Mill
Fitzsimmons, J. C. Civil	Charleston	65 Legare St.
s Frampton, W. H. Agri. III	Charleston	212 Ashley
s Frick, G. E. Text.	Lexington	Chapin
Gentry, T. C. Mech. Elec.	Clarendon	Summerton
Gilmore, W. C. Text.	Union	Santuc
Hagood, H. A. Civil	Spartanburg	N. Church
Hale, P. S. Agri. III	Charleston	Mt. Pleasant
Hall, J. D. Mech. Elec.	Pickens	Central
s Hanahan, J. E. Text.	Charleston	R. No. 1 Johns Island
Harrison, S. E. Text.	Greenville	Simpsonville
s Herbert, W. W. Agri. I	Newberry	Newberry
Heriot, H. A. Mech. Elec.	Lee	Providence
s Hiers, J. L. Agri. III	Hampton	Hampton
s Hodges, F. Agri. III	Greenwood	Greenwood
s Hutson, L. D. Agri. III	Aiken	Aiken
Jones, B. M. Mech. Elec.	Newberry	P.O. Bx. 103 Newberry
Kangeter, J. H. Mech.	Charleston	31 Hasell
s King, C. J. Agri. III	Lancaster	Lancaster
King, J. F. Agri. III	Charleston	108 Wentworth
s Kyser, W. T. Agri. II	Lexington	Lexington
Lachicotte, A. H. Agri. I	Georgetown	Waverley Mills
Lawton, M. S. Mech. Elec.	Barnwell	Allendale
s Lathrop, F. H. Agri. II	Orangeburg	Orangeburg
Massey, T. F. Mech. Elec.	York	Fort Mill
McAlhany, T. D. Civil	Dorchester	St. George
McClure, J. W., Jr. Civil	Union	Union

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
McGee, H. S. Mech. Elec.	Anderson	Honea Path
McGill, J. A. Agri. II	Abbeville	Abbeville
s McLeod, W. G. Agri. III	Darlington	Hartsville
s Mellett, F. M. Agri. III	Sumter	Mullins
Merritt, J. A. Civil	Edgefield	Ridge Springs
Morrison, W. E. Mech. Elec.	Chester	Chester
s Meyers, P. E. Agri. I	Berkeley	Cordesville
Newman, W. W. Mech. Elec.	Chesterfield	R. No. 2. McBee
Park, A. D. Mech. Elec.	Fairfield	Winnsboro
s Patrick, C. S. Agri. I	Cherokee	R. No. 2 Gaffney
Pearce, G. H. Agri. I	Edgefield	Johnston
Pearson, J. F. Mech. Elec.	Orangeburg	R. No. 2 Orangeburg
s Pennell, F. B. Agri. II	Anderson	Belton
s Pennell, R. E. Text.	Anderson	Belton
s Perrin, J. W. Agri. II	Lee	Bishopville
Provost, E. T. Mech. Elec.		827 E. Ave. York, Nebraska
Rabb, S. W. Text.	Greenville	Greenville
Robertson, F. H. Mech. Elec.	Charleston	27 Montague
Robison, R. Text.	Greenville	Greers
s Seal, J. L. Agri. II	Greenwood	Greenwood
s Seigler, W. O. Text.	Greenwood	Troy
Sloan, D. M. Mech. Elec.	Greenville	125 James
Smarr, W. L. Agri. I	York	Sharon
Sanders, M. F. Mech. Elec.	Greenwood	Greenwood
Stokes, C. E. Agri. I	Laurens	Mountville
Stoudemire, C. E. Text.	Lexington	Chapin
Todd, J. N. Civil	Oconee	Seneca
s Turbeville, A. C. Agri. I	Charleston	222 Ashley
s Weeks, T. W. Text.	Aiken	White Pond
Wilson, T. B. Civil	Aiken	Augusta, Ga., R. No. 3
Wolfe, L. F. Civil	Orangeburg	86 E. Amelia
Yeargin, B. F. Agri. I	Laurens	Gray Court
Youmans, C. P. Agri. III	Barnwell	Fairfax

SOPHOMORE CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Anderson, L. N. Eng.	Greenville	Greenville

NOTE: s—Indicates Scholarship Student

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Name and Course	County	Residence
Martin, R. F. Eng.	Anderson	Williamston
Massey, L. H. Eng.	York	R. No. 3, Ft. Mill
s McBride, J. N. Agri.	Florence	Florence
McDonald, F. H. Eng.	Charleston	361 Meeting
McDonald, J. W. Eng.	Edgefield	Parksville
s McIntosh, J. M. Agri.	Richland	Columbia 1631 Richland
s McMillan, G. F. Text.	Bamberg	Ehrhardt
Miley, J. Agri.	Hampton	Brunson
Mitchell, C. F. Eng.	Laurens	Mountville
Moore, D. P. Eng.	Sumter	R. F. D Sumter
Morgan, G. D. Eng.	Greenville	305 S. Church
Moses, H. C. Eng.	Sumter	110 W. Liberty
Oetzel, J. G. Eng.	Union	Union
Opt, R. A. Eng.	Anderson	R. No. 3, Belton
s Padgett, W. W. Agri.	Saluda	Leesville
s Parker, H. L. Agri.	Spartanburg	Roebuck
Pearlstine, L. C. Eng.	Calhoun	St. Matthews
Perry, W. L. Eng.	Richland	Columbia 1518 Wasn'ton.
s Pressley, E. H. Agri.	Chester	Chester
s Reeves, W. A. Agri.	Fairfield	Longtown
Rice, C. A. Eng.	Richland	Columbia, 1319 Hudt. St.
Rice, W. H. Agri.	Bamberg	Denmark
s Ridgill, R. H. Agri.	Clarendon	Manning
Rivers, W. J. Eng.	Richland	Eastover
Rogers, C. B. Eng.	Darlington	Darlington
s Rogers, T. B. Text.	Williamsburg	Vox
s Salter, F. P. Agri.	Edgefield	Trenton
Schilletter, A. E. Agri	Oconee	Clemson College
Schilletter, W. A. Agri.	Oconee	Clemson College
Seagers, E. H. Eng.	Darlington	Hartsville
Scruggs, J. Y. Eng.	York	Rock Hill
Sheppard, G. J. Eng.	Edgefield	McCormick
Simmons, J. W. Eng.	Laurens	R. No. 1, Gray Court
Smith, C. O. Agri.	Spartanburg	Cowpens
s Smith, G. W. Agri.	Anderson	Townville
Smith, H. L. Eng.	Anderson	1804 S. Main
Smith, J. D. Eng.	Union	Union
Smith, Jas. M. 2nd Eng.	Newberry	Newberry
Smith, Joe. M. 1st Eng.	Anderson	Starr
Smith, M. R. Eng.	Anderson	Pendleton

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Smith, W. W. Agri.	Pickens	Calhoun
s Sprott, W. T. P. Agri.	Clarendon	Foreston
Stanford, A. G. Eng.	Charleston	66 Bull
Stender, H. R. Agri.	Charleston	54 Hasell
Sturkey, M. N. Eng.	Edgefield	Plum Branch
Taylor, W. A. Eng.		Dadeville, Alabama
Thomas,J. L. Agri.	Chester	R. No. 4, Chester
Thomas, W. P. Eng.	Spartanburg	Trough
Thornton, C. C. Eng.	Laurens	Mountville
Thornhill, T. W. Eng.	Dorchester	Summerville
Tinsley, D. D. Eng.	Spartanburg	White Stone
Todd, J. R. Eng.	Abbeville	Due West
Todd, J. G. Eng.	Oconee	Seneca
Usher, A. B. Agri.		Gibson, North Carolina
Ward, A. H. Agri.	Florence	Timmonsville
Ward, A. R. Eng.	Georgetown	614 Prince
Ward, J. Eng.	Georgetown	614 Prince
Wells, J. H. S. Agri.	Spartanburg	Clifton
White, D. L. Eng.	Chesterfield	Jefferson
Whitten, F. W. Eng.	Anderson	Pendleton
Williams, L. E. Eng.	Charleston	152 Spring
Wilkerson, W. B. Agri.	York	Hickory Grove
s Willis, J. W. Agri.	Saluda	Saluda
Wingo, R. H. Eng.	Spartanburg	N. Church
Witherspoon, J. T. Agri.	Clarendon	Mayesville
s Woodward, J. T. Agri.	Aiken	Aiken
Wood, W. D. Agri.	Greenville	Greer
s Wright, V. B. Agri.	Chester	Leeds

FRESHMAN CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Acker, A. G. Agri.	Anderson	1039 S. Main
Adair, J. L. Eng.	Laurens	Clinton
Adams, H. M. Eng.	Edgefield	Meriwether
Allison, W. A. Eng.	Greenville	929 Buncombe
s Altman, F. K. Agri.	Marion	Marion

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Alverson, W. G. Eng.	Union	Union
s Andrews, N. Z. Agri.	Clarendon	Manning
s Arthur, W. D. Agri.	Union	Union
s Arthur, W. H. Agri.	Union	Union
Atkinson, G. P. Eng.	Florence	Timmonsville
Bailey, W. M. Eng.	Mulberry, Fla., care Florida Min. Co.	
s Barker, H. D. Agri.	Oconee	Tamassee
s Barnett, D. E. Agri.	Laurens	Laurens
Barnes, F. S. Eng.	York	Rock Hill
Barnett, M. S. Eng.	York	Clover
Barnwell, F. H. Eng.	Charleston	Adams Run
Bates, W. W. Agri.	Orangeburg	Orangeburg
Baxter, C. L. Eng.	Hampton	Garnet
Baxter, E. B. Eng.	Hampton	Garnet
Beatty, W. N. Agri.	Union	Union
Bell, M. E. Eng.		408 Third St., Wilmington, N. C.
Bell, St. J. E. Eng.	Charleston	12 Orange
Benjamin, R. N. Eng.	Greenwood	Greenwood
Bennett, C. G. Eng.	Lancaster	Lancaster
Berley, G. E. Eng.	Newberry	Pomaria
Beymer, O. H. Eng.	Spartanburg	Elford Terrace
Bigby, W. A. Eng.	Anderson	Williamston
Bobo, W. P. Agri.	Union	Sedalia
Boggs, L. A. Eng.	Pickens	Liberty
Bomar, W. M. Eng.	Spartanburg	Kennedy St.
Boone, T. E. Agri.	Orangeburg	Rowesville
s Bostick, B. Agri.	Beaufort	Beaufort
Booth, E. F. Eng.	Chester	Chester
Bowman, J. S. Eng.	Orangeburg	Rowesville
Breazeale, B. S. Eng.	Anderson	Pendleton
Briggs, G. R. Agri.	Greenwood	Greenwood
Bristol, H. W. Eng.	Beaufort	Washington St.
Brown, J. L. Eng.	Oconee	Mountain Rest
Bunch, J. B. Agri.	Spartanburg	Spartanburg
Bunker, F. L. Eng.	Pickens	Easley
Buyck, D. D. Eng.	Calhoun	St. Matthews
Byars, E. H. Agri.	Marion	Marion
Byers, J. L. Eng.	Orangeburg	Orangeburg
Camp, J. G. Eng.		Atlanta, Ga. 315 Gordon St.
Campsen, G. E. Eng.	Charleston	20 John St.

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s Cannon, J. C. Agri.	Greenville	Simpsonville
Carmichael, D. G. Eng.	Dillon	Fork
Carmichael, J. H. Eng.	Edgefield	Edgefield
Carson, H. G. Agri.	Orangeburg	Holly Hill
Cathcart, T. M. Agri.	Fairfield	Winnsboro
Caughman, K. G. Eng.	Richland	Columbia, 1013 Sumter
Caughman, W. W. Agri.	Lexington	Lexington
Chaplin, H. L. Agri.	Orangeburg	Neeses
Chapman, E. L. Agri.	Williamsburg	Johnsonville
Chapman, H. M. Eng.	Pickens	Liberty
Chapman, H. R. Eng.	Pickens	Liberty
Chapman, R. C. Agri.	Greenville	Pelzer
Clark, J. R. Agri.	Lexington	Chapin
Clowney, G. M. Eng.	Fairfield	Hop
Connor, F. Agri.	Orangeburg	Eutawville
s Connor, F. M. Agri.	Colleton	Smoaks
s Cook, W. B. Agri.	Bamberg	Olar
s Corbett, V. P. Agri.	Sumter	Horatio
Cork, W. N. Agri.	York	Rock Hill
Cothran, J. N. Agri.	Greenville	Toney Creek
Covar, A. B. Eng.	Edgefield	Edgefield
Coward, W. D. Agri.	Chesterfield	Cheraw
Craig, H. E. Eng.	Greenwood	238 Reynolds
Crayton, P. C. Eng.	Anderson	Anderson
s Creecy, P. J. Agri.	Clarendon	Manning
Creighton, Z. A. Eng.	Barnwell	Barnwell
Cromer, C. N. Eng.	Anderson	Anderson
Crosland, P. M. Eng.	Marlboro	Bennettsville
s Crouch, A. M. Agri.	Marlboro	Kollock
Crum, H. M. 2nd Agri.	Bamberg	Denmark
Cullen, C. W. Eng.	Orangeburg	Springfield
Culvern, F. M. Eng.	Lancaster	Kershaw
Cureton, R. B. Eng.	Greenville	Greenville
Curry, W. S. Agri.	Laurens	Owings
Davis, G. H. Agri.	Greenwood	Troy
s Davis, W. O. Agri.	Georgetown	Georgetown
Derrick, J. S. Agri.	Saluda	Batesburg
DeSaussure, E. H. Eng.	Charleston	66 Church
Dicks, W. H. Eng.	Barnwell	Dunbarton
Doyle, O. M. Agri.	Pickens	Calhoun

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Dozier, H. L. Eng.	Richland	Columbia, 1020 Sumter
Drakeford, J. M. Eng.	York	Yorkville
s Dukes, H. H. Agri.	Dorchester	St. George
DuVernet, E. P. Eng.	Greenville	R. No. 1 Greenville
s Edmonds, M. Agri.	Richland	R. No. 1 Columbia
Eleazer, G. W.. Agri.	Lexington	Chapin
Elmore, D. G. Eng.		Lorton, Virginia
Epps, W. C. Eng.	York	Fort Mill
Epting, C. K. Agri.	Newberry	Pomaria
s Evans, D. W. Agri.	Calhoun	Cameron
Fain, P. Eng.		Murphy, N. C.
s Faris, J. C. Agri.	York	Rock Hill
s Faris, M. A. Agri.	York	Fort Mill
Felder, L. W. Eng.	Laurens	Clinton
s Finch, W. H. Agri.	Chester	Fort Lawn
Flegal A. Eng.	Barnwell	Dunbarton
s Folk, C. E. Eng.	Newberry	Pomaria
Ford, A. W. Eng.	Georgetown	Georgetown
Foster, J. C. Eng.	Spartanburg	White Stone
Foxworth, G. D. Agri.	Marion	Marion..
Frazier, A. D. Eng.		Atlanta, Ga., 342 Gordon St.
Gaines, M. W. Agri.	Greenwood	Greenwood
s Garris, E. W. Agri.	Colleton	Round
Gasque, W. E. Agri.	Marion	Marion.
Gee, C. F. Eng.	Richland	R. No. 3 Columbia
Gibert, P. Agri.	Aiken	Graniteville
Haigler, A. Agri.	Calhoun	Cameron
Hamilton, B. L. Eng.	Oconee	Seneca
Hardin, T. B. Eng.	Chester	Chester
Harper, T. B. Eng.	Williamsburg	Kingstree
Harris, G. G. Eng.	Anderson	Belton
Harty, C. H. Eng.	Spartanburg	263 S. Church
s Harris, G. L. Agri.	Oconee	Westminster
Harris, M. H. Eng.	Laurens	Graycourt
Harvey, W. B. Agri.	Hampton	Hampton
Heaton, G. Eng.	Orangeburg	Branchville
Hellams, R. B. Eng.	Greenville	411 College
Henderson, J. R. Agri.	Charleston	14 Broad
Hendricks, C. M. Agri.	Pickens	Calhoun
Hendrix, R. C. Agri.	Greenville	R. No. 6, Greenville

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Hester, P. H. Eng.	Pickens	Liberty
Hill, B. F. Agri.	Bamberg	Bamberg
Hiers, M. T. Eng.	Hampton	Hampton
s Hoffman, G. P. Agri.	Fairfield	Blythewood
Holliday, F. G. Agri.	Horry	Galivant's Ferry
Holroyd, C. E. Eng.	Greenville	332 Green Ave.
Hood, S. C. Eng.	Orangeburg	170 E. Russell
s Hopkins, D. R. Agri.	Greenville	Fountain Inn
s Hough, T. Agri.	Greenville	206 Carrier
Hubster, E. L. Eng.	Colleton	Walterboro
Hunter, M. C. Eng.	Anderson	Belton
s Hunter, W. J. Eng.	Pickens	Liberty
s Hutchings, J. M. Agri.	Pickens	Pickens
Hutto, S. W. Agri.	Orangeburg	Vance
Iler, C. B. Eng.	Greenville	Greenville
Jeffords, S. E. Agri.	Florence	Timmonsville
Jeffords, T. E. Eng.	Darlington	250 Broad
Jenkins, W. L. Eng.	York	Rock Hill
Jennings, T. A. Agri.	Orangeburg	Cope
s Jeter, J. P. Eng.	Union	Santuc
Jeter, W. R. Agri.	Union	Carlisle
Jeter, W. T. Agri.	Union	Carlisle
John, D. M. Eng.	Marlboro	Bennettsville
Johnson, J. B. Eng.	Saluda	Fruit Hill
s Johnson, R. B. Agri.	Chester	Chester
Johnson, R. H. Agri.	Union	Mt. Tabor
Jones, J. D. Eng.	Sumter	R. No. 3 Sumter
Jones, T. M. Eng.	Richland,	Columbia, 1431 Pendleton
Jones, W. G. Eng.	Spartanburg	Spartanburg
Jones, W. S. Eng.	Lexington	Batesburg
Justus, F. B. Eng.	York	Hickory Grove
Kaminer, J. E. Agri.	Lexington	R. No. 2 Lexington
Keith, W. C. Agri.	Newberry	Chappels
Kendricks, J. W. Eng.	Cherokee	Gaffney
Kennerly, W. D. Eng.	Newberry	Newberry
Ketching, W. W. Agri.	Fairfield	Winnsboro
Kirven, N. W. Agri.	Darlington	Darlington
Kittles, E. G. Eng.	Hampton	Brighton
Koger, L. H. Agri.	Colleton	R. No. 2, Walterboro
s Lachicotte, E. S. Agri.	Georgetown	Waverley Mills

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s Lawhon, G. J. Agri.	Florence	Timmonsville
Langford, M. L. Agri.	Hampton	Brunson
Lawton, B. E. Agri.	Hampton	Garnett
Lawson, C. S. Agri.	Spartanburg	231 Spring
Lee, J. Jr., Agri.	Spartanburg	Landrum
s LeGette, F. C. Agri.	Marion	R. No. 7 Centenary
LeGrand, L. Eng.	Sumter	207 N. Main
Ligon, P. B. Eng.	Anderson	620 Whitner
Liles, J. F. Eng.	Marlboro	R. No. 4 Bennettsville
Lindfords, F. M. Agri.		P.O. Bx. 216 Waynesville, N. C.
Loadholt, J. T. Eng.	Barnwell	Fairfax
Loftis, W. P. Agri.	Oconee	Westminster
s Logan, J. R. Agri.	York	Yorkville
Long, A. Agri.	York	Rock Hill
s Ludlam, E. J. Agri.	Horry	Adrian
Lunney, G. W. Eng.	Darlington	Darlington
Lyles, A. C. Agri.	Chester	Chester
s Magill, W. K. Agri.	Abbeville	Abbeville
Marchant, J. L. Eng.	Greenville	Greer
Marshall, F. Eng.	Richland	1401 Laurel, Columbia
Marshall, S. P. Eng.	Greenwood	922 Marshall St.
Martin, E. O. Agri.	Spartanburg	Cowpens
Martin, G. D. Agri.	Spartanburg	Cowpens
Martin, S. J. Agri.	Anderson	R. No. 4, Anderson
Martin, W. P. Eng.	Barnwell	Blackville
Masters, C. W. Agri.	Anderson	R. No. 6, Anderson
Masters, M. K. Agri.	Anderson	R. No. 6, Anderson
May, W. I. Eng.	Richland	Columbia 1313 Sumter
McBain, J. M. Eng.	Spartanburg	Pacolet
McCall, P. L. Eng.	Darlington	R. No. 2, Society Hill
McConnell, H. S. Agri.	Anderson	R. No. 1, Anderson
McClellan, E. P. Eng.	Charleston	McClellansville
s McClure, J. A. Agri.	Sumter	Sumter
s McCullough, J. Eng.	Williamsburg	Benson
s McDerman, J. Eng.	Florence	Florence
McDermid, G. C. Agri.	Charleston	218 Rutledge
McEachern, D. H. Agri.	Dillon	Hamer
s McGowan, A. R. Agri.	Calhoun	Cameron
McIver, W. C. Agri.	Darlington	Darlington
McKeown, H. S. Agri.	Chester	Cornwell

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
McKinney, S. J. Eng.	Greenville	Tigerville
McLure, D. L. Eng.	Lee	Bishopville
McMahan, E. Agri.	Oconee	Richland
McMillan, W. L. Agri.	Abbeville	Abbeville
Merritt, W. D. Eng.	Saluda	Ridge Spring
Miles, F. A. Eng.	Charleston	69 Hasell
Miley, C. H. Eng.	Hampton	Brunson
Mims, C. Agri.	Clarendon	Pinewood
Mitchell, B. S. Agri.	Anderson	Honea Path
Mitchell, W. E. Eng.	Marlboro	Bennettsville
Monroe, J. B. Agri.	Marion	Marion
s Moore, G. F. Agri.	Florence	Mars Bluff
Moore, J. S. Agri.	Anderson	149 Marie
Morrow, F. L. Eng.	Anderson	Anderson
s Muldrow, H. W. Agri.	Darlington	Darlington
Murph, C. R. Agri.	Spartanburg	White Stone
s Murray, J. J. Agri.	Dorchester	St. George
Newton, J. L. Agri.	Anderson	Pendleton
Nettles, H. J. Agri.	Darlington	Hartsville
Nolen, C. J. Agri.	Spartanburg	R. No. 2, Spartanburg
Norris, J. E. Agri.	Orangeburg	Vance
Oliver, R. S. Eng.	Dillon	Hamer
s Osborne, F. Agri.	Spartanburg	179 N. Liberty
Owens, J. F. Eng.	Marion	Marion
Page, C. R. Agri.	Horry	Galivant's Ferry
s Page, P. S. Agri.	Horry	Galivant's Ferry
s Pate, E. H. Agri.	Lee	R. No. 5, Bishopville
Patjens, A. A. Eng.	Charleston	Mt. Pleasant
Paulling, R. M. Agri.	Calhoun	St. Matthews
Peeples, J. Eng.	Charleston	Meggetts
Pegues, J. K. Agri.	Chesterfield	McFarlan, N. C.
s Perritt, A. W. Agri.	Oconee	Seneca
Pinckney, J. D. Eng.	Charleston	25 New St.
Pitts, P. M. Eng.	Sumter	R. No. 3, Sumter
Poe, T. M. Eng.	Greenville	Greenville
Ponds, H. B. Agri.	Colleton	Islandton
s Poore, R. D. Agri.	Anderson	Belton
Pope, R. R. Eng.	Fairfield	Winnsboro
Porter, H. C. Eng.	Anderson	Pendleton
Porter, J. H. Agri.	Georgetown	315 Scriven

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Patterson, J. A. Eng.	Barnwell	Allendale
s Ragsdale, W. G. Eng.	Fairfield	Winnsboro
Ravenel, W. F. Agri.	Charleston	Adams Run
Reid, A. M. Agri.	Abbeville	Abbeville
s Reynolds, J. B. Agri.	Darlington	Lamar
Richards, J. P. Eng.	Kershaw	Liberty Hill
Richards, S. M. Agri.	Kershaw	Liberty Hill
Richardson, I. M. Agri.	Sumter	Sumter
Rickenbaker, D. Eng.	Orangeburg	82 Sellars
Rodgers, H. E. Eng.	Charleston	Ravenel
Rodgers, A. F. Eng.	Williamsburg	Kingstree
Rogers, R. A. Agri.	Marion	Marion
Rosa, D. D. Eng.	Georgetown	617 Prince
s Rosa, J. T. Agri.	Georgetown	617 Prince
Ryan, W. D. Eng.	Sumter	Wedgefield
Sanders, D. D. Agri.	Spartanburg	S. Church
s Sanders, J. W. Agri.	Chester	R. No. 2, Richburg
Scoville, W. N. Eng.	Orangeburg	31 Doyle St.
Schroder, J. N. Agri.	Charleston	157 Rutledge Ave.
Senn, P. H. Agri.	Newberry	Silver Street
s Shannon, C. J. Eng.	Chesterfield	Jefferson
Sharpe, J. G. Agri.	Lexington	Pelion
Sharp, W. B. Eng.	Abbeville	Mt. Carmel
s Shealey, A. L. Agri.	Newberry	Prosperity
Shealey, D. B. Agri.	Lexington	Chapin
Shealey, W. B. Agri.	Lexington	White Rock
Sherrill, S. S. Eng.		Charlotte, N. C., 605 N. Graham
Shiver, H. E. Agri.	Oconee	Clemson College
Siddall, T. H. Eng.	Sumter	18 Harby Ave.
Simmons, B. F. Agri.	Orangeburg	Rowesville
s Simpson, J. A. 2nd Agri.	Chester	Richburg
Simpson, F. T. Eng.	Anderson	Starr
Skelton, S. E. Eng.	Pickens	Liberty
Smith, M. A. Eng.	Clarendon	Turbeville
Smith, H. D. Eng.	Lexington	Batesburg
Smith, I. M. Agri.	Newberry	Kinards
Smith, P. N. Eng.	Anderson	Pendleton
s Smith, W. S. Agri.	Union	Union
Smoak, R. R. Agri.	Spartanburg	White Stone
Smoke, A. Agri.	Calhoun	St. Matthews

NOTE: s—Indicates Scholarship Student

	Name and Course	County	Residence
	Sondley, R. Agri.	Abbeville	Abbeville
	Spears, J. M. Eng.	Union	Jonesville
	Spratt, T. Eng.	Chester	114 Pinckney
s	Stewart, R. B. 1st. Agri.	Pickens	Easley
	Stewart, R. B. 2nd Eng.	Anderson	Pelzer
	Stello, L. H. Eng.	Charleston	192 Rutledge Ave.
	Still, G. A. Eng.	Barnwell	Blackville
	Stillwell, J. R. Eng.	Abbeville	McCormick
	Stradley, W. P. Eng.	Greenville	Greenville
	Strother, J. R. Eng.	Edgefield	Edgefield
s	Stribling, F. D. Agri.	Spartanburg	Enoree
s	Sullivan, J. D. Agri.	Laurens	Laurens
	Sullivan, W. B. Eng.	Anderson	Anderson
s	Tarrant, L. R. Agri.	Greenwood	1035 E. Cambridge
	Taylor, G. B. Agri.	Lexington	Gilbert
s	Teal, W A. Agri.	Chesterfield	Middendorf
	Thomas, J. G. Eng.	Union	Carlisle
	Thomas, N. G. Agri.	Orangeburg	Cope
s	Thompson, S. J. Agri.	Marlboro	McColl
s	Thornton, R. P. Agri.	Laurens	Mountville
	Thrower, J. R. Eng.	Chesterfield	Cheraw
	Tolbert, J. R. Agri.	Abbeville	Abbeville
	Tolbert, L. M. Agri.	Greenwood	Greenwood
	Trescot, J. H. Eng.	Anderson	Pendleton
	Trott, H. R. Eng.	Charleston	Mt. Pleasant
s	Trotter, A. M. Agri.	Kershaw	Camden
s	Trotter, J. W. Eng.	Saluda	Saluda
	Turbeville, W. M. Eng.	Clarendon	Turbeville
	Tyler, G. R. Eng.	Aiken	Windsor
s	Vaughn, C. L. Agri.	Darlington	Darlington
	Wadsworth, W. C. Agri.	Darlington	R. No. 1, Hartsville
	Walker, St. J. M. Agri.	Charleston	132 Smith St.
	Wannamaker, H. L. Eng.	Calhoun	R. No. 1, St. Matthews
	Wannamaker, W. B. Agri.	Calhoun	R. No. 2 St. Matthews
	Ward, C. W. Agri.	Florence	Timmonsville
	Watkins, H. B. Eng.	Anderson	224 E. Church
	Watson, D. J. Eng.	Anderson	R. No. 4, Anderson
	Webb, S. C. Eng.	Anderson	701 McDuffie
	Wells, C. W. Eng.	Greenville	505 Buncombe
s	West, C. F. Agri.	Spartanburg	White Stone

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Weston, C. T. Agri.	Richland	Congaree
Williams, B. N. Agri.	Greenwood	Gaines
Williams, W. G. Eng.	York	Yorkville
Winters, E. Agri.	Darlington	Society Hill
Witherspoon, J. K. Agri.	Anderson	Roberts
Wood, J. T. Eng.	Greenville	Greer
Woodward, D. B. Eng.	Aiken	Aiken
s Wright, C. K. Agri.	Anderson	Belton
Yeargin, G. W. Eng.	Laurens	Gray Court

PREPARATORY CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name	County	Residence
Allsbrook, J. G.	Horry	Sanford
Barnett, P. G.	Oconee	R. No. 5, Westminster
Blanchard, E.	Charleston	Moultrieville
Bowden, W. G.	Anderson	R. No. 3, Anderson
Britt, J B.	Abbeville	R. No. 1, McCormick
Brockington, J. H.	Williamsburg	Indiantown
Brown, C. K.	Anderson	R. No. , Anderson
Brown, M.	Fairfield	Blythewood
Brown, P. S.	Charleston	Adams Run
Brown, P. R.	Oconee	R. No. 1, West Union
Carter, L.	Darlington	R No. 5, Timmonsville
Chaplin, A. H.	Orangeburg	Neeses
Chappell, J. H.	Fairfield	Blythewood
Cook, J. L.	Lancaster	R. No. 1, Taxahaw
Cook, R. P.	Berkeley	Pinopolis
Crim, W. F.	Calhoun	R. No. 1, St. Matthews
Copeland, L. L.	Laurens	Renno
Deas, H. B.	Clarendon	Summerton
Derrick, B A.	Saluda	R. No. 5, Prosperity
Earle, S. M.	Richland	Columbia
Ellis, A.	Abbeville	R. No. 5, Abbeville
Fennell, J. E.	Hampton	Hampton
Felder, C. J.	Orangeburg	Branchville
Felder, G. V.	Orangeburg	Branchville
Garrison, T. E.	Anderson	Denver
George, S. B.	Anderson	R. No. 3, Pendleton
Gilmore, P.	Union	Santuc

Name and Course	County	Residence
Glenn, A. B.	Anderson	R. No. 3, Anderson
Grant, C. O.	Abbeville	Mt. Carmel
Hammette, F. L.	Spartanburg	Converse
Hawley, T. W.	Fairfield	Blythewood
Hodge, H. L.		Atlanta, Ga., 107 Ivy St.
Howle, A. J.	Darlington	R. No. 1, Society Hill
Hale, H. V.	Charleston	Mt. Pleasant
Hammond, W.	Anderson	R. No. 3, Anderson
Hyman, W. H.	Florence	Hyman
Johnston, A. T.	Saluda	Fruit Hill
Kelly, I. F.	Florence	R. No. 2, Cowards
Kennedy, J. L.	Abbeville	McCormick
Laidlaw, R. E.	Horry	Pt. Harrelson
Lemmon, D. G.	Lee	R. No. 2, Elliott
Lipscomb, J. W.	Cherokee	R. No. 4, Gaffney
Livingston, A. H.	Orangeburg	North
Lumpkin, R. E.	Fairfield	Winnsboro
Lanham, G. F.	Edgefield	R. No. 2, Edgefield
Mace, J. L.	Marion	Tabernacle
Mason, W. H.	Hampton	R. No. 1, Estell
Massey, J.	Lancaster	R. No. 2, Taxhaw
McDaniel, C. T.	Anderson	R. No. 1, Anderson
McIntyre, W.	Greenville	R. No. 5, Greenville
McKie, J. G.	Edgefield	Meriwether
McLaurin, J. R.	Dillon	R, No. 3, Latta
Milling, D. H.	Fairfield	Winnsboro
Mims, S. L.	Clarendon	Pinewood
Morrah, U. W.	Abbeville,	Willington
Newman, S. L.	Oconee	Clemson College
Pell, G. C.	Oconee	Walhalla
Polk, C. H.	Colleton	Islandton
Powe, R. W.	Darlington	R. No. 1, Hartsville
Rankin, T. C.	Anderson	Anderson
Riser, W. E.	Saluda	Leesville
Roberts, S. L.	Dillon	Latta
Russell, J. A.	Anderson	Autun
Sanders, H. H.	Sumter	Hagood
Singley, J. A.	Newberry	Prosperity
Sitton, J. J. 1st	Anderson	R. No. 4, Easley
Sitton, J. J. 2nd	Anderson	Pendleton
Smith, J. B.	Newberry	R. No. 1, Newberry
Smith, R. F.	Pickens	Calhoun

Name and Course	County	Residence
Stultz, F. A.	York	Rock Hill
Thomson, G. I.	Spartanburg	Pacolet
Tiller, H. G.	Lee	R. No. 1, Bethume
Truluck, G. M.	Lee	Lynchburg
Turbeville, J. E.	Clarendon	Turbeville
Vaughn, W. E.	Darlington	R. No. 2, Timmonsville
Warner, H. T.	Greenwood	Greenwood
Watkins, J. M.	Newberry	R. No. 1, Chappels
Weaver, E.	Darlington	R. No. 5, Timmonsville
Werts, J. C.	Saluda	R. No. 2, Chappels
West, C. T.	Oconee	Clemson College
White, J. K.	Edgefield	R. No. 2, McCormick
Wier, R. S.	Laurens	R. No. 4, Renno
Williams, F. R.	Pickens	Cateechee
Wilkes, T. F.	Chester	R. No. 2, Chester
Winburn, M. C.	Chesterfield	Middendorf
Witherspoon, S. M.	Clarendon	R. No. 2, Mayesville
Witherspoon, T. C.	Anderson	Roberts
Wyatt, E. F.	Anderson	R. No. 4, Easley

SPECIAL AND IRREGULAR STUDENTS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Bedell, A. S. IV & VI	Greenville	Greenville
Bissell, P. L. IV & VI	Charleston	169 Rutledge St.
Boozer, H. S. Eng.	Newberry	1935 Harrington St.
DesChamps, C. E.	Sumter	Sumter
Evans, A. B. Mech. Elec.	Charleston	70 Ashley Ave.
Fizer, J. R. Mech. Elec.	Orangeburg	Branchville
Haynesworth, A. T. Agri.	Sumter	103 E. Calhoun St.
Houck, W. A. Agri.		Lenoir, N. C.
Hughes, I. B. Agri.	York	R. No. 7, Yorkville
Johnson, W. F. Mech. Elec.	Bamberg	Bamberg
Perry, T. Tex.	Greenville	140 James St.
Rentz, W. H. Civil	Hampton	Varnville
Rivers, H. F. Jr., Mech. Elec.	Charleston	Charleston
Schroder, F. E. Civil	Charleston	157 Rutledge St.
Steele, E. P. Agri.	York	R. No. 4, Rock Hill
Thomas, H. M. Agri.	Clarendon	Manning

Name and Course	County	Residence
Black, F. Mech. Elec.		Pelham, N.Y.
Muldrow, J. J. Eng.	Edgefield	Clarks Hill
Williford, W. H. Text.	Sumter	Sumter

FARMER'S SHORT COURSE IN AGRICULTURE

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Name	County	Residence
Carwile, R. H.	Abbeville	R. No. 5, Abbeville
Shirley, J. H.	Pickens	R. No. 3, Liberty
Stephenson, J. W.	Greenville	Greer
Vincent, U. A.	Florence	R. No. 1, Mars Bluff
White, R. D.	Clarendon	R. No. 1, Alcolu
Thomas, R. P.	Pickens	R. No. 1, Dacusville
Cely, C. C.	Anderson,	R. No. 1, Piedmont

SPECIAL TEXTILE STUDENTS

Name and Course	County	Residence
Ashmore, C. J.	Greenville	R. No. 1, Princeton
Echols, W. T.	Cherokee	Cherokee
Jones, C. H.	Cherokee	Gaffney
Lewis, C.	Pickens	Pickens

WORK BOY COURSE

Name and Course	County	Residence
Avinger, O.	Berkeley	Cordesville
Bull, C. N.	Greenville	R. No. 5, Greenville
Burnett, D. P.	Saluda	Dyson
Cotton, J. L.	Richland	Eastover
Craig, H. C.	Greenwood	238 Reynolds St.
DuPre, J. S.	Oconee	R. No. 1, Walhalla
Dyches, B. H.	Barnwell	R. No. 2, Elko
Foster, S. W.	Spartanburg	R. No. 1, Roebuck
Franklin, J.	Abbeville	R. No. 1, Willington
Gilliland, B. W.	Greenville	R. No. 1, Fountain Inn
Greene, E. B.	Florence	R. No. 4, Timmonsville

Name and Course	County	Residence
Hill, T. C.	York	Leslie
Hubbard, G. C.	Oconee	R. No. 4, Seneca
Hubbard, J. M.	Oconee	R. No. 4, Seneca
Hudson, W. O.	Chester	Bascomville
Jenkins, C. D.	Sumter	R. No. 1, Rembert
Long, S. C.	Newberry	R. No. 3, Prosperity
Martin, A. C.	Berkeley	R. No. 1, Ridgeville
Meredith, L. L.	Anderson	R. No. 2, Townville
Ogburn, W.	Kershaw	R. No. 1, Westville
Parks, J. B.	Spartanburg	R. No. 1, Woodruff
Parnell, C. E.	Darlington	R. No. 4, Lamar
Platt, R. B.	Charleston	Adams Run
Reed, C. C.	Anderson	R. No. 7, Anderson
Reed, D. A.	Anderson	R. No. 1, Belton
Riley, S. D.	Berkeley	Ridgeville
Rivers, T. W.	Orangeburg	Neeses
Rowell, E. M.	Marion	Tabernacle
Sanders, B.	Sumter	R. No. 1, Dalzell
Stuckey, L.	Sumter	R. No. 1, Dalzell
Suber, W. C. C.	Newberry	Strother
Thompson, S. A.	Clarendon	Jordan
Turner, J. C.	Greenwood	Ninety Six

GENERAL SUMMARY OF STUDENTS

By Classes

CLASS	Agricultural Courses				Engineering Courses					GRAND TOTALS
	Agriculture	Agri. & Ani. Ind.	Agri. & Chem.	TOTAL	Chem. & Geol.	Mech. & Elec. Eng.	Civil Eng.	Textile Industry	TOTAL	
Senior	21	14	17	52	1	19	10	11	41	93
Junior	16	8	14	38		22	13	13	48	86
Sophomore**				63					86	149
Freshman**				171					163	334
Spec. & Irreg.				5	2	6	3	6	16	21
Short Course				7						7
Preparatory										88
Work Boy				33						33
TOTALS	37	22	31	369	3	47	26	30	354	811

** Freshmen and Sophomores are not classified into the various courses.

SUMMARY OF STUDENTS BY COUNTIES IN SOUTH CAROLINA

	Free Tuition	Pay Tuition	Scholarship	Total
Abbeville	21	3	4	28
Aiken	3	1	5	9
Anderson	49	6	7*	62
Bamberg	5	2	3	10
Barnwell	7	6	3	16
Beaufort		1	2	3
Berkeley	5		3	8
Calhoun	7	4	3	14
Charleston	28	14	7	49
Cherokee	6	2	2	10
Chester	12	1	6*	19
Chesterfield	4	2	3	9
Clarendon	8	5	5*	18
Colleton	6		4	10
Darlington	22	4	5*	31
Dillon	5	1	1	7
Dorchester	3		2	5
Edgefield	13	1	2	
Fairfield	10		4	
Florence	10		5*	
Georgetown	2	5	3	
Greenville	21	14	6	
Greenwood	16	2	5*	
Hampton	10	3	3	1
Horry	1	3	4*	8
Kershaw	5	1	3	9
Lancaster	4	1	2	7
Laurens	13	3	5*	21
Lee	4	1	3	8
Lexington	17	2	4	23
Marion	6	4	4	14
Marlboro	5	2	5*	12
Newberry	8	7	3	18
Oconee	15	7	4*	26

Orangeburg	24	6	4	34
Pickens	17	3	4*	24
Richland	12	2	5	19
Saluda	9	1	3	13
Spartanburg	29	8	7	44
Sumter	10	6	4	20
Union	14	2	4*	20
Williamsburg	3	2	2	7
York	16	5	6*	27
Total South Carolina	484	143	170	798
Total from other states				13
Grand Total				811

*This apparent increase over the county apportionment is due to one year scholarship appointments from the State at large on account of failures of candidates to pass the scholarship examination in other counties. The greatest number of scholarships held at any one time was 167, the number allowed by the law.

Summary by States

South Carolina	798
North Carolina	5
Kentucky	1
Georgia	3
New York	1
Nebraska	1
District of Columbia	1
Florida	1
Total	811

In addition to the above number of 810 students there were 37 other young men to matriculate, but were not permitted to enter college on account of insufficient preparation. This would give the total **Number of Matriculates** 848

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CATALOG

—OF—

The Clemson Agricultural College

Of South Carolina

State Agricultural and Mechanical College

TELEGRAPH AND POST OFFICES: CLEMSON COLLEGE
EXPRESS AND FREIGHT OFFICES: CALHOUN

RECORD OF TWENTIETH YEAR

1912-1913

—AND—

Announcements For 1913-1914

Clemson College Print 1913

1913

JULY							SEPTEMBER							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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6	7	8	9	10	11	12	7	8	9	10	11	12	13	2	3	4	5	6	7	8
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AUGUST							OCTOBER							DECEMBER						
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10	11	12	13	14	15	16	12	13	14	15	16	17	18	14	15	16	17	18	19	20
17	18	19	20	21	22	23	19	20	21	22	23	24	25	21	22	23	24	25	26	27
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1914

JANUARY							MARCH							MAY						
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11	12	13	14	15	16	17	15	16	17	18	19	20	21	10	11	12	13	14	15	16
18	19	20	21	22	23	24	22	23	24	25	26	27	28	17	18	19	20	21	22	23
25	26	27	28	29	30	31	29	30	31	..	..	..	..	24	25	26	27	28	29	30
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FEBRUARY							APRIL							JUNE						
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	7	8	9	10	11	12	13
15	16	17	18	19	20	21	12	13	14	15	16	17	18	14	15	16	17	18	19	20
22	23	24	25	26	27	28	19	20	21	22	23	24	25	21	22	23	24	25	26	27
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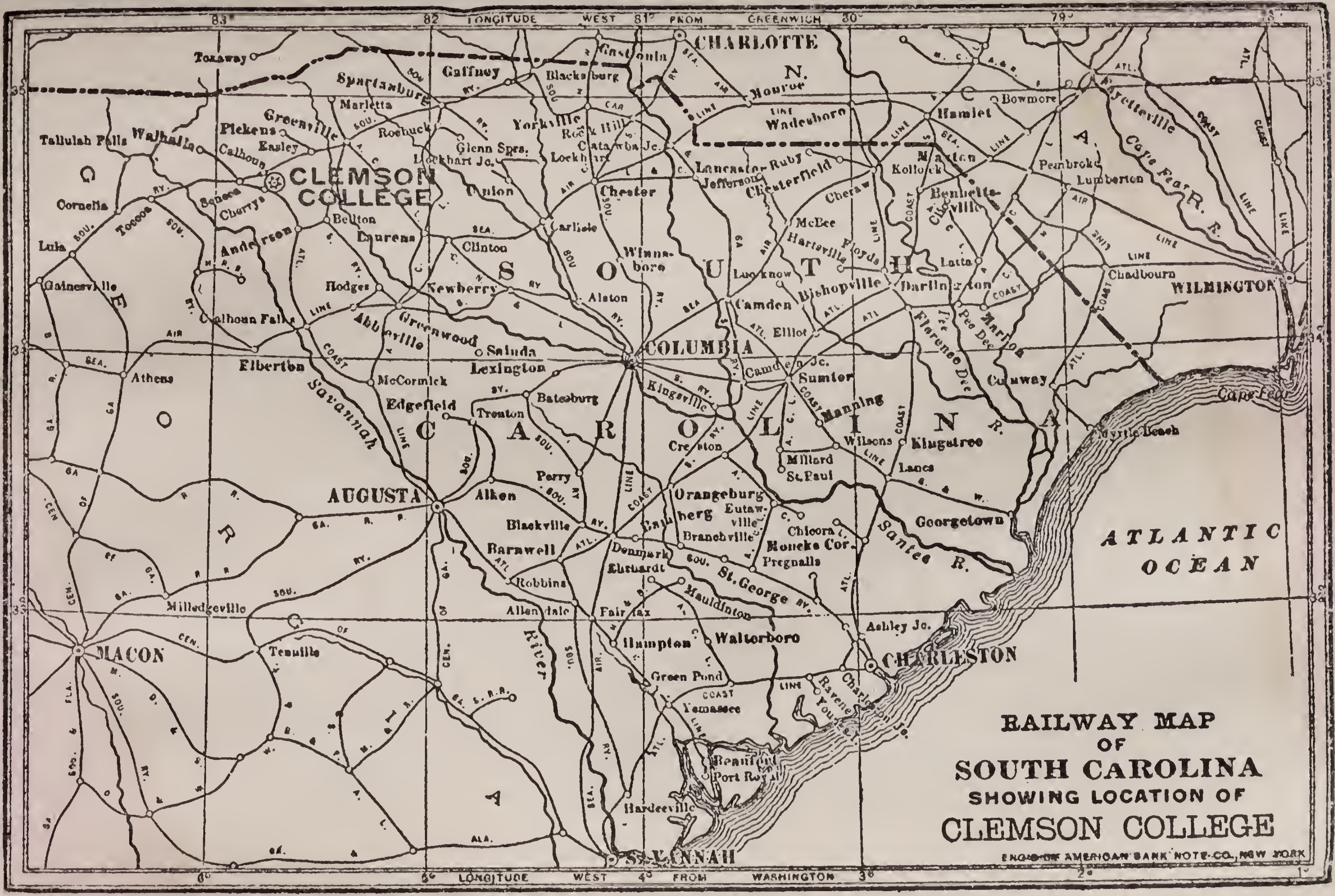

RAILWAY MAP
OF
SOUTH CAROLINA
SHOWING LOCATION OF
CLEMSON COLLEGE

COLLEGE CALENDAR

Session 1913-1914

1913 First Term

Sept. 10—Opening of the 21st session; exercises begin at 8:30 a. m.
Sept. 11—Examinations for removal of conditions.
Sept. 12—Examinations for removal of conditions.
Sept. 13—Examinations for removal of conditions.
Sept. 15—Class work begins for the First Term.
Sept. 17—Arrival of new students.
Oct. 1—Beginning of One Year Agricultural Course.
Oct. 24—First "Month ' of the first term ends.
Nov. 27—Thanksgiving; a holiday.
Dec. 12—Second "Month" of the first term ends.
Dec. 13—Examinations for the first term begin.
Dec. 23—First day of the Christmas Holidays.

1914 Second Term

Jan. 3—Christmas vacation ends 11:30 p m.
Jan. 3—The Second Term begins at 11:30 p. m.
Jan. 13—Beginning of Four Weeks Courses.
Jan. 17—Annual Public Exercises of the Columbian Literary Society.
Jan. 19—Lee's birthday.
Feb. 6—First "Month" of the second term ends.
Feb. 10—End of Four Weeks Courses.
Feb. 21—Annual public exercises of the Palmetto Literary Society.
Feb. 22—Washington's birthday,
Feb. 24—Stated meeting of the Board of Trustees.
March 13—Second "Month" of the second term ends,
March 14—Examinations for the second term begin.
March 18—Calhoun's birthday; a holiday.
March 21—Annual public exercises of the Calhoun Literary Society

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1914 Third Term

March 23—The Third Term begins at 8:30 a. m.
April 24—First "Month" of the Third Term ends.
May 23—Examinations for the Senior Class begin.
May 29—Second "Month" of the third term ends.
May 30—Examinations for the third term begin.
June 1—Completion of One Year Agricultural Course.
June 7—Beginning of the Commencement Exercises; Baccalaureate Sermon.
June 8—Contest of Literary Society representatives; Military exercises. Address of Alumni Orator.
June 9—Commencement Day. Address to the Graduating Class. Graduating Exercises. Delivery of diplomas.
July 10—Examinations for scholarships and for entrance at each county seat.
July 14—Stated meeting of the Board of Trustees.
July 20—Last day for receiving SCHOLARSHIP APPLICATIONS.

Note. The faculty reserves the right to make such changes in the above schedule as may seem necessary or desirable.

Grades and Reports.

Reports of class standing and discipline are sent to the parents at intervals of approximately one and one-half months throughout the session. During 1913-1914 these reports will be made up for periods ending on the following dates, and will usually be mailed to parents about one week later. **October 24, and December 20*, 1913; February 6 and March 21*, 1914; April 24 and June 5*, 1914.** Dates marked with an asterisk are approximate, depending upon the time that the term examinations end. The grades sent out on these three dates are a combination of the examination grade with the average grade of the two months.

Quarterly Dues.

(See fees and expenses.)

These dues are payable Sept. 10, November 17, 1913; January 24 and April 2, 1914. Prompt payments are required of all.

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HON. W. W. BRADLEY	Abbeville, Abbeville Co.
HON. R. I. MANNING	Sumter, Sumter Co.
**HON. A. F. LEVER	Peak, Lexington Co.

Term Expires 1914

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HON. IVY M. MAULDIN	Pickens, Pickens Co.

Term Expires 1916

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DR. R. H. TIMMERMAN	Batesburg, Lexington Co.
HON. S. T. McKEOWN	Cornwell, Chester Co.

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* Deceased. ** To succeed Hon. R. W. Simpson

STANDING COMMITTEES OF THE BOARD*

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Messrs. Donaldson, Bradley, McKeown, Mauldin, Hughes

Finance Committee
Messrs. Simpson,** Donaldson, Mauldin, Bradley, Manning

Agricultural Committee
Mtssrs. Tillman, Wannamaker, Manning, Evans,** Rawl

Fertilizer Committee
Messrs. Evans,** Manning, McKeown

Entomological Committee
(State Crop Pest Commission)
Messrs. Evans,** Timmerman, Hughes

Veterinary Committee
Messrs. Evans,** Timmerman, Hughes

Scholarship Committee
Messrs. Bradley, Evans,** Hughes

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*The President of the Board of Trustees, Hon. Alan Johnstone, is ex officio a member of all committees. ** Deceased

Board of Visitors for the Sessions 1911-1912 and 1912-1913

Meeting First Wednesday in May

First District.—Hon. J. Elmore Martin, Charleston, S. C.
Second District.—Hon. Wm. T. Walton, Johnston, S. C.
Third District.—Hon. J. J. Ballenger, Seneca, S. C.
Fourth District.—Hon. Thos. F. Parker, Greenville, S. C.
Fifth District.—Hon. G. K. Laney, Chesterfield, S. C.
Sixth District.—Hon. D. R. Coker, Hartsville, S. C.
Seventh District.—Hon. R. O. Purdy, Sumter, S. C.

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President

PAUL HAMILTON EARLE SLOAN, M. D.
Treasurer and Secretary Board of Trustees

ALEXANDER MAY REDFERN, B. S., M. D.
Surgeon

JOSEPH MICHAEL CUMMINS
1st. Lieutenant 18th Infantry, U. S. Army
Commandant

JAMES CORCORAN LITTLEJOHN, B. S.
Registrar and Assistant to the President

SAMUEL WILDS EVANS
Bookkeeper

MISS KATHERINE BOCQUET TRESCOT
Librarian

JOHN NATHAN HOOK
Justice Clemson College Corporation

AUGUST SCHILLETTER
Steward

FLOYD LANDON CARROLL
Assistant Bookkeeper

HARRY A. SLOAN
Quartermaster for Cadets

JAMES PERCIVAL LEWIS
Supt. of Convicts and of Work on Roads and Campus

MISS MARGARET L. SADLER
Secretary to the President

MISS ETTA M. SADLER
Stenographer to Agricultural Department

JAMES GRIFFIN HILTON *
Clerk to the Commandant

MISS ANNE ALLSTON PORCHER
Assistant Librarian

MISS PAULINE HUGHES
Stenographer to the Engineering Department

L. BOYD BRANDON, B. S.
Foreman of College Farm

JOSEPH HEWER
Superintendent of Construction and Repairs

HENRY C. GOODMAN
College Plumber

---

* Resigned

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President
Consulting Professor of Engineering

ENGINEERING DEPARTMENT

SAMUEL BROADUS EARLE, A. M., M. E.
Director of Department
Professor of Mechanical Engineering

HALE HOUSTON, C. E.
Professor of Civil Engineering

RUDOLPH EDWARD LEE, B. S.
Professor of Drawing and Designing, and
College Architect

FRANK TOWNES DARGAN, M. S.
Professor of Electrical Engineering

WILLISTON WIGHTMAN KLUGH, B. S.
Assistant Professor of Drawing and Designing

JOHN WEEMS GANTT
Assistant Professor of Forge and Foundry Work

STYLES TRENTON HOWARD, B. M. E.
Assistant Professor of Machine Shop Work

ANDREW BURCHILL GARDNER
Assistant Professor of Woodwork

WALTER C. WAGNER, M. M. E. *
Assistant Professor of Mechanical and Electrical Engineering

SAMUEL R. RHODES, B. S.
Assistant Professor of Mechanical and Electrical Engineering

FRANCIS RAYMOND SWEENEY, B. S.
Assistant Professor of Civil Engineering

MAHLON THOMAS BIRCH, B. S.
Instructor in Drawing

DAVID NIVIN HARRIS, B. S.
Instructor in Drawing

ARNOLD O. HORNING
Instructor in Woodwork

DANIEL WILLIS SYLVESTER
Instructor in Forge and Foundry

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*Resigned

AGRICULTURAL DEPARTMENT
(Combined with the Experiment Station)

JOSEPH NELSON HARPER, B. S., M. Agr.
Director of Agricultural Department and Experiment Station
FRED HARVEY HALL CALHOUN, Ph. D.
Vice Director of Agricultural Department
Professor of Geology and Mineralogy
CHARLES CARTER NEWMAN, B. S.
Professor of Horticulture
M. RAY POWERS, D. V. S.
Professor of Veterinary Science
HENRY WALTER BARRE, B. S., M. A.
Professor of Botany and Bacteriology
ALBERT FREDERICK CONRADI, B. S. A.
Professor of Entomology and Zoology
WASHINGTON LAFAYETTE HUTCHINSON, M. S.
Professor of Agronomy
RICHMOND LEE SHIELDS, B. S.
Professor of Animal Husbandry and Dairying
JOHN GALENTINE HALL, M. A.*
Associate Professor of Botany and Bacteriology
JUNIUS MILTON BURGESS, B. S.
Associate Professor of Dairying
FRANK TOWNSEND WILSON, B. S.
Assistant Professor of Agronomy
MELVIN PHILIP SOMES, M. S.
Assistant Professor of Entomology and Zoology
OLIN MITCHELL CLARK, B. S.
Assistant Professor of Horticulture
ARTHUR BALLARD MASSEY, B. S.
Assistant in Botany and Bacteriology
MURRAY STAR GARDINER, B. S.
Assistant in Agronomy and Farm Machinery

ACADEMIC DEPARTMENT

CHARLES MANNING FURMAN, A. B
Professor of English
WILLIAM SHANNON MORRISON, A. B.
Professor of History and Political Economy
SAMUEL MANER MARTIN, B. S.
Professor of Mathematics
THOMAS GRAYSON POATS, M. E., E. E.
Professor of Physics
AUGUSTUS G. SHANKLIN, B. S.
Associate Professor of Mathematics

---

* Resigned

DAVID WISTAR DANIEL, M. A.
Associate Professor of English
THOMAS WADLINGTON KEITT
Assistant Professor of English
ARTHUR BUIST BRYAN, B. S., B. Litt.
Assistant Professor of English
JOSEPH EVERETT HUNTER, B. S.
Assistant Professor of Mathematics
MARK EDWARD BRADLEY, A. B.
Assistant Professor of English
BURR HARRISON JOHNSTONE, A. B.
Assistant Professor of Mathematics
ANDREW BRAMLETT, B. S.
Assistant Professor of Mathematics
ALESTER GARDEN HOLMES, B. S.
Assistant Professor of History

DEPARTMENT OF CHEMISTRY

MARK BERNARD HARDIN
Professor Emeritus of Chemistry
RICHARD NEWMAN BRACKETT, A. B., Ph. D.
Director of Department
Professor of Chemistry
DAVID HILL HENRY, B. S.
Associate Professor of Chemistry
GUY FLEMING LIPSCOMB, B. S.
Assistant Professor of Chemistry
W. TUDOR PEARCE, B. S.
Instructor in Chemistry
BENJAMIN FREEMAN, B. S.
Assistant in Chemistry

DEPARTMENT OF TEXTILE INDUSTRY

CHARLES STEBBINS DOGGETT
Director of Department
Professor of Textile Chemistry and Dyeing
CLAUDE WIGHTMAN McSWAIN, B. S.
Assistant Professor of Weaving and Designing
WM. R. MEADOWS, A. B., S. B.
Assistant Professor of Carding and Spinning

MILITARY DEPARTMENT

JOSEPH MICHAEL CUMMINS
1st. Lieut. 18th Infantry, U. S. A., Commandant of Cadets
Professor of Military Science and Tactics
THOMAS P. DUCKETT
Military Assistant to the Commandant

PREPARATORY CLASS

LAWRENCE ANDREW SEASE, B. S.
Assistant Professor of English
Headmaster of Preparatory Class
BENJAMIN JOHNSTON WELLS, L. I., A. B.
Instructor Preparatory Class

STANDING COMMITTEES TO THE PRESIDENT

(The President is ex officio a member of each committee. The first named in each instance is chairman.)

Discipline
The President, the Commandant, Brackett, Calhoun, Doggett, Earle, Furman, Hardin, Harper, Houston, Martin, Morrison
Re-Examinations and Promotions
Martin; Brackett, Dargan, Doggett, Earle, Furman, Harper, Houston, Littlejohn, Morrison
Entrance Requirements
Furman; Calhoun, Littlejohn, Martin, Morrison, Sease, Hutchinson
Schedule
Morrison; Henry, Bramlett, Keitt, T. W., Lee, McSwain, Poats, Powers
Library
Bryan; Calhoun, Earle, Henry, Keitt, T. E., McSwain
Irregular Students
Hunter; Klugh, Lipscomb, Burgess, Poats
Catalog
Doggett; Brackett, Bryan, Howard, Littlejohn, Barre
Student Recreation
Henry; Calhoun, Holmes, Houston, Lipscomb, the Commandant
Athletics
Calhoun; Gantt, Johnstone, Poats, Henry
Student Publications
Keitt, T. W.; Bradley, Holmes
Religious Services
Earle; Bradley, Burgess, Holmes, Wells
Chapel Music
Daniel; McSwain, Sweeney
Chapel Entertainments
Daniel; Houston, Johnstone, Martin, Powers
State Fair
Howard; Burgess, Conradi, McSwain, the Commandant, Shields
Campus
Houston; Hall, Newman
Reception
Harper; Brackett, Daniel, Stackhouse, the Commandant
Alumni
Lee; Bryan, Burgess, Henry, Klugh
Museum
Calhoun; Barre, Hall
Text Book
Shanklin; Wells, Mitchell

SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

(Combined with the Agricultural Department)

Station Staff

JOSEPH NELSON HARPER, B. S., M. Agr.
Director and Agronomist
CHARLES CARTER NEWMAN, B. S.
Horticulturist
HENRY WALTER BARRE, B. S., M. A.
Botanist and Plant Pathologist
ALBERT FREDERICK CONRADI, B. Agr., M. S.
Entomologist
THOMAS ELLISON KEITT, B. S.
Chemist
RICHMOND LEE SHIELDS, B. S.
Animal Husbandman
JOHN NATHAN HOOK
Secretary and Librarian
MAURICE RAY POWERS, D. V. S.
Consulting Veterinarian
WASHINGTON LAFAYETTE HUTCHINSON, M. S.
Associate Agronomist
JOHN GALENTINE HALL, A. B., A. M.
Associate Botanist and Plant Pathologist
OLIN MITCHELL CLARK, B. S.
Assistant Horticulturist
MELVIN PHILIP SOMES, M. S.
Assistant Entomologist
WILLIAM ANDREW THOMAS, B. S.
Experimental Field Entomologist
WILLIAM BARRE AULL, B. S.
Assistant to Botanist
LAWRENCE ORR WATSON, B. S.
Experimental Field Pathologist
FRANK GREEN TARBOX, JR., B. S.
Assistant in Agronomy
FRANK TOWNSEND WILSON, B. S.
Assistant in Agronomy
TURNER RICHARDSON HADEN, B. S.
Assistant in Animal Husbandry
THOMAS RAYSOR RISHER, B. S.
Assistant in Chemistry
JOHN A. GOODWIN, B. S. *
Supt. of Coast Station, Summerville, S. C.
R. E. CURRIN,
Supt. of Pee Dee Station, Florence, S. C.
BURNS GILLISON,
Supt. of Experiment Station Farm
MISS HELEN C. BRADFORD
Stenographer

---

* In place of W. D. Garrison, resigned.

Division of Farmers' Institutes and Extension Work

PUBLIC STATE WORK

JOSEPH NELSON HARPER, B. S., M. Agr.
Director

W. W. LONG
State Agent of the Farmers' Co-operative Demonstration Work
and Superintendent of the Division of Farmers' Institutes
and Extension Work

WILLIAM LESLIE ENGLISH, B. S.*
State Agent of the Farmers' Co-operative Demonstration Work
and Superintendent of the Division of Farmers' Institutes
and Extension Work

CHRISTOPHER BRADSHAW HADDON, B. S. *
Special Agent in charge of Boys' and Girls' Demonstration Work in
Co-operation with United States Farm Demonstration Work

RALPH HEDGES MASON, B. S.
Junior Dairyman, U. S. Department of Agriculture

C. F. NIVEN, B. S., M. S.
Assistant in Horticulture

HENRY C. EAGERTON, B. S.
Assistant in Entomology

MISS MAYME STOKES
Stenographer

Demonstration Agents of the Farmers' Co-operative Demonstration Work of the Bureau of Plant Industry, United States Department of Agriculture working in co-operation with Clemson College

State Agent

W. W. LONG
State Agent of the Farmers' Co-operative Demonstration Work
and Superintendent of the Division of Farmers' Institutes
and Extension Work
Clemson College, S. C.

WILLIAM LESLIE ENGLISH, B. S. *
State Agent of the Farmers' Co-operative Demonstration Work
and Superintendent of the Division of Farmers' Institutes
and Extension Work
Clemson College, S. C.

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* Resigned

PUBLIC STATE WORK

(Division of Farmers' Institutes and Extension Work—Continued)

District Agents

Name	Headquarters	Territory
Baker, L. L.	Bishopville	S. E. Part of State
Barton, W. H.	Simpsonville	N. W. Part of State
Elliott, W. R.	Winnsboro	Central Part of State

Local Agents

Name	Headquarters	Territory
Allston, R. L.	Georgetown	Georgetown County
Arrants, F. H.	Camden	Kershaw County
Blair, J. R.	Sharon	York County
Bowen, T. A.	Pickens	Pickens County
Carberry, J. L.	Winthrop College, Rock Hill	
Carnell, F. W.	Union	Union County
Cauthen, W. M.	Ninety Six	Greenwood County
Chitty, W. B.	Olar	Bamberg County
Claffy, J. F.	Orangeburg	Orangeburg County
Claffy, J. H.	Ft. Motte	Calhoun County
Cunningham, R. L.	Chester	Chester County
Duncan, S. M.	Newberry	Newberry County
Dusenbury, Chas.	Conway	Horry County
Epps, T. O.	Kingstree	Williamsburg County
Finklea, J. O.	Hyman	Florence County
Frampton, W. M.	Charleston	Charleston County
Haddon, C. B.	Greenville	Greenville County
Hayes, J. M.	Dillon	Dillon County
Holland, M. G.	Walhalla	Oconee County
Hudson, B. M.	Pinopolis	Berkeley County
Lester, T. B.	McColl	Marlboro County
Lever, W. T. J.	Blythewood	Richland County
Lemmon, R. H.	Winnsboro	Fairfield County
Lott, P. N.	Johnston	Edgefield County
McAlhany, D. L.	St. George	Dorchester County
McCluney, F.	Gaffney	Cherokee County
McFaddin, C. A.	Manning	Clarendon County
McManus, C. L.	Lancaster	Lancaster County
Muldrow, J. B.	Darlington	Darlington County
Oswald, J. H.	Estill	Hampton County
Price, B. G.	Walterboro	Colleton County
Reeder, H. C.	Edmund	Lexington County
Reid, S. F.	Abbeville	Abbeville County
Sanders, A. M.	Barnwell	Barnwell County
Shealy, J. W.	Ballentine	Lexington County
Tarrant, D. L	Springfield	Orangeburg County
Vincent, W. C.	Bluffton	Beaufort County
Watts, Jno. D. W.	Laurens	Laurens County
Welsh, S. N.	Elliots	Lee County
Williams, J. F.	Sumter	Sumter County

(PUBLIC STATE WORK—Continued)

FERTILIZER CONTROL

RICHARD NEWMAN BRACKETT, Ph. D.
Chief Chemist

BENJAMIN F. ROBERTSON, B. S.
Chemist

CLAUDE FURMAN INMAN, B. S.
Assistant Chemist

COKE SMITH LYKES, B. S.
Assistant Chemist

JOHN TREUTLEN FOY, B. S.
Assistant Chemist

HUGH MILTON STACKHOUSE
Secretary Board of Fertilizer Control

WILLIAM BENJAMIN WEST
Chief Fertilizer Inspector

MISS MARGARET E. GASQUE
Stenographer to Secretary Board of Fertilizer Control

STATE CONTROL OFFICERS

DR. RICHARD NEWMAN BRACKETT
State Chemist

ALBERT FREDERICK CONRADI, M. S.
State Entomologist

M. P. SOMES, M. S.
Assistant State Entomologist

DR. M. RAY POWERS
State Veterinarian

DR. ROBERT OLIVER FEELEY
Assistant State Veterinarian

DR. M. L. QUIGLEY
Assistant State Veterinarian

DR. W. E. SIMONSEN
Assistant State Veterinarian

DR. H. L. SIMPSON *
Assistant State Veterinarian

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* Resigned

MINISTERS FOR THE SESSION 1912-1913

BAPTIST	Rev. T. V. McCaul
EPISCOPAL	Rev. R. M. Marshall
METHODIST	Rev. P. A. Murray
PRESBYTERIAN	Rev. W. H. Mills

COMMENCEMENT SPEAKERS—JUNE 1913

Baccalaureate Sermon

Rev. Howard Lee Jones, D. D., Charleston, S. C.

Commencement Address

Pres. George H. Denny, Ph.D., LL.D.
University of Alabama, Tuscaloosa, Alabama

REGIMENTAL ORGANIZATION

1912-'13

JOSEPH M. CUMMINS
1st Lieutenant, 18th Infantry, U. S. A.
Commanding

REGIMENTAL STAFF

J. L. Seal	Captain and Adjutant
H. A. Hagood	Captain and Quartermaster
W. T. Kyzer	Captain and Commissary

NON-COMMISIONED STAFF

J. W. Erwin	Sergeant Major
T. W. Thornhill	Quartermaster Sergeant
R. B. Ezell	Color Sergeant
F. H. Robertson	Color Sergeant

FIRST BATTALION

MAJOR J. W. BARNWELL

C. P. Youmans	1st Lieutenant and Battalion Adjutant
G. E. Frick	2nd Lieutenant and Battalion Quartermaster and Commissary
B. P. Barron	Sergeant Major

Co. A	**Co. B**	**Co. C**	**Co. D**
CAPTAINS			
W. W. Herbert	F. H. Lathrop	C. K. Dunlap	P. E. Myers
LIEUTENANTS			
J. F. King	F. W. Bouson	E. T. Provost	W. E. Morrison
C. E. Stoudemire	S. K. Brown	J. K. Boggs	W. E. Bowers
1st SERGEANTS			
A. R. Boyd	C. E. DesChamps	J. B. Douthit	F. J. Jervey
SERGEANTS			
D. K. Banks	J. E. Fletcher	C. C. Thornton	G. H. Brown
J. A. Berly	W. F. Brawley	B. R. Lever	J. W. McClure
J. R. Todd	H. S. Boozer	M. A. Dantzler	A. B. Haight
C. R. Emerson	A. B. Usher	R. H. Ridgell	F. P. Salter
CORPORALS			
H. W. Bristol	F. A. Miles	P. H. Hester	W. A. Bigby
R. C. Chapman	J. S. Bowman	W. N. Cork	C. L. Vaughan
V. P. Corbett	H. L. Wannamaker	W. H. Arthur	J. Peeples
P. L. McCall	J. A. Patterson	R. P. Thornton	M. A. Smith
W. B. Wannamaker	G. L. Harris	W. D. Arthur	E. H. Pate

SECOND BATTALION

MAJOR M. S. LAWTON

H. S. McGee .... 1st Lieutenant and Battalion Adjutant
J. E. Hanahan .... 2nd Lieutenant and Battalion Quartermaster and Commissary
J. T. Woodward .... Sergeant Major

<table>
<tr><th>Co. E</th><th>Co. F</th><th>Co. G</th><th>Co. H</th></tr>
<tr><td colspan="4">CAPTAINS</td></tr>
<tr><td>H. G. Boyleston</td><td>C. S. Patrick</td><td>L. D. Hutson</td><td>R. Robison</td></tr>
<tr><td colspan="4">LIEUTENANTS</td></tr>
<tr><td>J. H. Kangeter
J. A. Magill</td><td>G. H. Pearce
D. M. Sloan</td><td>J. W. Perrin
A. D. Parke</td><td>A. J. Evans
F. Hodges</td></tr>
<tr><td colspan="4">1st SERGEANTS</td></tr>
<tr><td>R. F. Jenkins</td><td>J. E. Dunlap</td><td>W. F. Lachicotte</td><td>F. H. McDonald</td></tr>
<tr><td colspan="4">SERGEANTS</td></tr>
<tr><td>E. H. Pressley
E. R. Gilmore
J. G. Oetzel
E. Hanvey</td><td>J. M. McIntosh
W. L. Perry
L. C. Pearlstine
T. B. Rogers</td><td>J. H. S. Wells
J. T. Witherspoon
T. G. Harris</td><td>M. W. Hunter
J. N. McBride
B. M. James
E. M. Byrd</td></tr>
<tr><td colspan="4">CORPORALS</td></tr>
<tr><td>J. E. Kaminer
F. D. Stribling
T. M. Cathcart
D. D. Buyck
F. Osborn</td><td>D. H. McEachern
R. B. Cureton
G. W. Smith
G. P. Hoffman
S. W. Hutto</td><td>J. H. Trescot
W. O. Davis
E. S. Lachicotte
L. LeGrand
H. S. McKeown</td><td>W. C. Epps
S. C. Skelton
E. O. McMahon
G. E. Berly</td></tr>
</table>

THIRD BATTALION

MAJOR S. W. RABB

A. B. Evans .... 1st Lieutenant and Battalion Adjutant
A. H. Lachicotte .... 2nd Lieutenant and Battalion Quartermaster and Commissary
A. L. Edwins .... Sergeant Major

<table>
<tr><th>Co. I</th><th>Co. K</th><th>Co. L</th><th>Co. M</th></tr>
<tr><td colspan="4">CAPTAINS</td></tr>
<tr><td>D. L. Cannon</td><td>A. C. Turbeville</td><td>J. O. Erwin</td><td>W. G. McLeod</td></tr>
<tr><td colspan="4">LIEUTENANTS</td></tr>
<tr><td>C. J. King
W. C. Gilmore</td><td>M. D. Berry
W L. Smarr</td><td>J. L. Hiers
W. D Banks</td><td>T. F. Davis
J. N. Todd</td></tr>
<tr><td colspan="4">1st SERGEANTS</td></tr>
<tr><td>J. C. Barksdale</td><td>A. P. Gandy</td><td>W. T. P. Sprott</td><td>T. C. Haddon</td></tr>
<tr><td colspan="4">SERGEANTS</td></tr>
<tr><td>G. M. Armstrong
J. W. Willis
W. D. Wood
J. G. Todd</td><td>J. L. Carson
G. R. Morgan
B. M. Jackson
F. H. Robertson</td><td>W. A. Reeves
D. D. Tinsley
F. C. Dantzler
A. G. Stanford</td><td>J. F. Harrison
J. W. McDonald
A. H. Ward
H. L Parker</td></tr>
<tr><td colspan="4">CORPORALS</td></tr>
<tr><td>J. L. Marchant
J. T. Wood
H. H. Dukes
E. G Acker</td><td>S. M. Richards
J. C. Cannon
R. B. Johnstone
F. M. Connor</td><td>P. C. Crayton
D. R. Hopkins
R. N. Benjamin
R. B. Stewart 1st
C. J. Shannon</td><td>L. A. Boggs
E. P. DuVernet
E. W. Garris
B. L. Hamilton</td></tr>
</table>

CADET BAND

M. Coles	1st Lieutenant and Chief Musician
R. S. Hood	Drum Major
H. L. Smith	Sergeant

O. H. Beymer, Corporal	Solo Bb Cornet
J. S. Moore, Corporal	First Trombone
H. M. Adams	Second Cornet
C. W. Baker	Solo Bb Cornet
V. F. Bryant	Third Alto
F. L. Bunker	First Cornet
G. E. Campsen	Bugler
E. M. Doar	First Alto
J. M. Drakeford	First Clarinet
C. F. Gee	Bugler
H. L. Grant	Bugler
J. R. Henderson	Bugler
R. H. Jennings	Second Clarinet
H. C. Lewis	Tenor
G. C. McDermid	Baritone
B. F. Simmons	Cymbals
H. R. Stender	Bass Drum
W. R. Williams	Bugler
F. E. Nigels	Snare Drum
J. A. Middleton	First Cornet
H. L. Smith	Eb Bass
W. B. Wilkerson	Second Trombone

HISTORICAL SKETCH

Thomas G. Clemson, after whom the College is named, was born in Philadelphia in April, 1807, and died at the Fort Hill home April 6, 1888.

In 1823, then scarcely 16 years old, he ran away from home, and, after spending some time in England, went to Paris, where he took up arms in the revolutions of that time. His gallantry brought him recognition and the friendship of prominent men, resulting in his being given a course in the celebrated School of Mines in Paris. In this school he remained four years, graduating with high honors.

While he was in Europe, his father died, leaving nothing to him in his will. Soon after this he returned to Amercia, and establishing himself in Washington, practiced his profession of Mining Engineer, and accumulated a comfortable fortune. It was here that he met Miss Anna Marie, the eldest daughter of John C. Calhoun, and married her. Two children resulted from this union—a daughter Floride, who afterwards became Mrs. Gideon Lee, of New York, and a son, John Calhoun Clemson.

Mr. Clemson was a strong advocate of the political doctrine of Mr. Calhoun, and when the war broke out, fearing arrest, he and his son escaped by night in a boat, and walking to Richmond, offered their services to President Davis. Mr. Clemson was assigned to the Trans-Mississippi Nitre Mining Department, where he served until the end of the war. His son was appointed a Lieutenant and assigned to active duty.

At the end of the war, Mr. Clemson with his family came to Pendleton and resided with Mrs. John C. Calhoun until her death in 1866.

Mr. Clemson was interested as far back as this date in the establishment of an Agricultural and Industrial College. In November 1886, a Committee was appointed, consisting of

Hon. Thomas G. Clemson, Hon. R. F. Simpson and Col. W. A. Hayne, to appeal to their fellow citizens for

> "Aid to found an institution for educating our people in the Sciences, to the end that our Agriculture may be improved, our worn and improvised soils be recuperated, and the great natural resources of the South be developed."

In January 1867, at a meeting of the Pendleton Farmers' Society, Mr. Clemson addressed the body in "an able and most interesting and instructional discourse," and submitted in the form of a circular the appeal above referred to. The circular was written by Mr. W. H. Trescot, and closes with the words:

> "Letters and contributions to be directed to the Hon. Thos. G. Clemson, LL. D., Chairman of the Committee, Pendleton, Anderson District, South Carolina."

Again in the minutes of the same Society, of which he was elected President in 1868, under date of Oct. 14, 1869, we find the following:

> "The President, (Mr. Clemson), entertained the Society for half an hour on the subject of Scientific Agriculture, and the Importance of Scientific Agricultural Education."

These citations indicate an early interest on the part of Mr. Clemson in the great cause to which he later devoted his estate.

Previous to the war Mrs. John C. Calhoun had sold the Fort Hill place and negroes to her son, Col. Andrew P. Calhoun, taking in payment his bond and mortgage for $40.000. At her death, she left a will, which resulted in her daughter Mrs. Clemson, getting three-fourths of the value of this bond and mortgage, and her granddaughter, who at the time of Mrs. Calhoun's death was Mrs. Gideon Lee of New York, the remaining one-fourth.

Shortly after Mrs. Calhoun's death, which was followed by the death of Col. A. P. Calhoun, Mrs. Thomas G. Clemson, after considerable costly litigation foreclosed the mortgage on the Fort Hill place, and at the sale of property in Walhalla in January 1872, Mr. Clemson, as Trustee for his wife and daughter, bid it in for $15,000*, and he himself paid out of his private funds $8,000 to cover lawyer's fees, court cost, etc.

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*See Title Book Oconee County, P. 177-f.

In 1871, Mr. Clemson's daughter, then Mrs. Lee, died, and seventeen days after, his only son, John Calhoun Clemson, was killed in a railroad accident at Seneca. Left childless, Mrs. Clemson willed to her husband, Thomas G. Clemson, all of her estate "absolutely and in fee simple."*

Mr. Clemson, in his will, left to his granddaughter, Floride Isabella Lee, $15,000 to free the property, which by the same will was donated to the State, from any claim in equity that the granddaughter might have. This was, of course, in addition to one-fourth of the estate which descended to Miss Lee from her mother, who acquired it under the terms of the original will of Mrs. Calhoun, and additional to the $8,000 paid out by Mr. Clemson for fees, court costs, etc., when the entire estate was bought in.

Neither by intention, nor by donation, nor by any form of hereditary transmission does it anywhere appear that John C. Calhoun had anything to do with the founding of the College which bears Clemson's name.

In 1875 Mrs. Clemson died, and on April 6, 1888, Mr. Clemson followed her to the grave, and was buried in the Episcopal church yard at Pendleton.

Mr. Clemson's will was bitterly contested by the Lee family, but was finally fully sustained by the Supreme Court. After the settlement of the will, the Trustees of the College bought from Miss Floride Isabella Lee her one-fourth of the estate which adjoined the tract given to the State by Mr. Clemson.

The following extracts are made from Mr. Clemson's will** in order to show clearly his purpose in offering his property to the State for the founding of the Clemson Agricultural College.

* * * * "Feeling a great sympathy for the farmers of this

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*See Judge of Probate's Office, Oconee Co., Apartment 26, Package 287. **See Judge of Probate's Office, Oconee Co., Apartment 64, Package 671.

State, and the Difficulties with which they have to contend in their efforts to establish the business of agriculture upon a proper basis, and believing that there can be no permanent improvement in agriculture without a knowledge of those sciences which pertain particularly thereto, I have determined to devote the bulk of my property to the establishment of an Agricultural College upon the Fort Hill Place. My purpose is to establish an Agricultural College which will afford useful information to the farmers and mechanics; therefore it should afford thorough instruction in agriculture and the natural sciences connected therewith; it should combine, if practicable, physical with intellectual education, and should be a high seminary of learning in which the graduate of the common schools can commence, pursue and finish a course of studies terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture. But I desire to state plainly, that I wish the Trustees of said institution to have full authority and power to regulate all matters pertaining to said institution, * * * * but to always bear in mind that the benefits herein sought to be bestowed are intended to benefit agriculture and mechanical industries." * * * *

"I therefore give * * * * the aforesaid Fort Hill place where I now reside, formerly the house of my father-in-law, John C. Calhoun, consisting of eight hundred and fourteen acres, more or less, in trust that whenever the State of South Carolina may accept said property as a donation from me, for the purpose of thereupon founding an Agricultural College, in accordance with the views I have hereinbefore expressed, (of which the chief justice of South Carolina shall be the Judge,) then my executor shall execute a deed of the said property to said State and turn over to the same all property hereinafter given as an endowment of said institution, to be held as such by the said State so long as it in good faith devotes said property to the purpose of the donation." * * * *

"The following named gentlemen, seven in number, shall be seven of the Board of Trustees, to wit R. W. Simpson. D. K. Norris, M. L. Donaldson, R. E. Bowen, B. R. Tillman, J. E. Wannamaker, and J. E. Bradley; and the State, if it accepts the donation, shall never increase the Board of Trustees to a number greater than thirteen in all, nor shall the duties of the said Board be taken away or conferred upon any other men or body of men. The seven Trustees appointed by me, shall always have the right, and the power is hereby given them and their successors, which right the Legislature shall never take away or abridge, to fill all vacancies which may occur in their number by death, resignation, refusal to act, or otherwise. But the Legislature may provide as it sees proper for the appointment or election of the other six Trustees, if it accepts the donation * * * * The name of this Institution is to be "The Clemson Agricultural College of South Carolina."

In the codicil to his will, Item 12, occurs the following significant statement:

"The desire to establish such a school or college as I have provided for in my said last will and testament, has existed with me for many years past, and many years ago I determined to devote the bulk of my property to the establishment of an Agricultural School or College. To accomplish this purpose is now the one great desire of my life."

In November 1889, the General Assembly of South Carolina passed the necessary acts authorizing the acceptance of the terms of Mr. Clemson's will, and the establishment of the College. The following extracts are taken from the State laws relating to the College:

Section 1300: "The Honorable Thomas G. Clemson having departed this life on the sixth day of April, A. D. 1888, leaving of force his last will and testament * * * * wherein he devised and bequeathed the Fort Hill plantation, as well as all his other property, both real and personal, except certain legacies in the said will mentioned and provided for, all in trust to convey to the State of South Carolina when the said State shall accept the same for the purpose of establishing and maintaining an Agricultural and Mechanical College upon the aforesaid Fort Hill plantation upon the terms and conditions of said will, **the State of South Carolina hereby expressly declares that it accepts the devise and bequest of Thomas G. Clemson, subject to the terms and conditions set forth in his last will and testament."** * * * *

"Section 1302: The said College shall be under the management and control of a Board of Thirteen Trustees composed of the seven members nominated by said will and their successors and six members to be elected by the Legislature in Joint Assembly."

"Section 1304: That it shall require a two-thirds vote of said Board of Trustees to authorize the expenditure of any moneys appropriated to said College by the State, or to authorize the sale or transfer or re-investment of any property or moneys arising from the sale of any property under the provisions of this Act."

"Section 1319: All the privilege tax on fertilizers heretofore required to be paid to the Commissioner of Agriculture shall in the future be paid to the Treasurer ot the State, subject to the order of the Board of Trustees of the Clemson Agricultural College of South

Carolina; and so much of the money so received as shall be necessary to defray the expenses of the Board in performing the duties now by this Act devolved upon them shall be thus used, and the balance shall go to the said College, for its erection and maintenance."

It will be seen from the above extracts that the State accepted in good faith the terms of Mr. Clemson's will, a feature of which was the maintenance of the College, and recognition of the self-perpetuating life membership appointed by Mr. Clemson.

One of the early official acts of the Board was the passage of a rule that nine votes be required not only to appropriate money, as required by the State Law, but to elect. any officer of the College as well. This rule was adopted that there might be no just criticism of domination by the Life Trustees.

HISTORY OF THE COLLEGE

The College was opened in July 1893, with an enrollment of 446 students. The session extended from the third Thursday in February to the third Thursday in December, with the idea of giving all students in Agriculture an opportunity to be instructed in the practical phases of that subject during the crop growing season.

On the night of May 22, 1894, the main College building was burned, but the regular work continued, and the building was promptly re-built.

The first graduating exercises were held in December 1896, the graduating class numbering thirty-seven,—fifteen in the Agricultural Courses, and twenty-one in the Engineering Courses. In the fall of 1897, the session was changed to begin the second Wednesday in September and close the second Wednesday in June, as it had been found inadvisable to operate the College through the hot summer months. The exercises of the second commencement, which would normally have occurred in December 1897, were held Feb. 6 to 9, 1898. The under-graduate classes were continued until June. It will be observed that, owing to the change from winter to summer vacation, there was no class graduated in 1897.

Since 1898 the annual commencement exercises have been held regularly in June, but the closing day was afterwards changed to the first Tuesday, instead of second Wednesday, and in the session of 1910-11 to the second Tuesday.

The College has been in continuous operation, and is now in its twentieth session. During this time, the average enrollment has been 597, and the total 11,572, and the total number of graduates, (estimating the number for the present session at 76), is 936 distributed as follows:

In the Agricultural Courses 382, in the Engineering Courses 449; in the Textile Courses 105.

The table on the following page gives accurate information as to the attendance, number of graduates, etc.

Session	Total Enrollment	Graduates by Courses							Total Graduates
		Agriculture	Agriculture & Chemistry	Agri. & Animal Industry	Mech. & Electrical Eng.	Civil Engineering	Chemistry & Geology	Textile Industry	
1893	446	0	0	0	0	0	0	0	0
1894	635	0	0	0	0	0	0	0	0
1895	370	0	0	0	0	0	0	0	0
1896	350	15	0	0	22	0	0	0	37
'97-'98	*449	15	0	0	10	0	0	0	25
'98-'99	446	6	0	0	7	3	0	0	16
'99-'00	461	12	0	0	12	0	0	4	28
'00-'01	483	9	0	0	13	0	0	9	31
'01-'02	500	12	0	0	28	2	0	17	59
'02-'03	539	7	0	0	28	5	0	20	60
'03-'04	605	4	0	0	26	2	0	5	37
'04-'05	637	5	0	0	21	8	1	5	40
'05-'06	652	18	0	0	20	15	0	7	60
'06-'07	658	28	0	0	25	15	0	1	69
'07-08	690	53	0	7	12	12	1	0	85
'08-'09	648	9	8	10	17	8	3	0	55
'09-'10	653	13	10	10	22	19	1	2	77
'10-'11	703	19	7	18	18	8	4	13	87
'11-'12	813	21	17	14	18	10	3	11	94
'12-'13	834	7	14	15	20	9	0	11	76
Totals	11572	253	56	74	319	116	13	105	936

By an act of the State Legislature in the session of 1904, and amended in the session of 1907, 165 beneficiary scholarships were established, of the value of $100 per annum each, and free tuition, apportioned among the counties in the same manner as the members of the Senate and House of Representatives. This number has since been increased to 168, by the creation of three new counties.

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*Feb. 8, to July 15, 1897 and Aug. 15, 1897, to June 8, 1898.

ORGANIZATION OF THE COLLEGE

1. **Agricultural Department and Agricultural Experiment Station**
   - Agronomy
   - Geology and Mineralogy
   - Horticulture
   - Veterinary Science
   - Zoology and Entomology
   - Animal Husbandry and Dairying
   - Botany and Bacteriology
   - Chemistry
   - Extension Work and Farmers' Institutes

2. **Engineering Department**
   - Electrical Engineering
   - Mechanical Engineering
   - Civil Engineering
   - Drawing and Designing
   - Forge and Foundry Work
   - Machine Work
   - Wood Work

3. **Chemical Department**
   - Chemistry
   - Metallurgy

4. **Textile Department**
   - Carding and Spinning
   - Weaving and Designing
   - Textile Chemistry and Dyeing

5. **Academic Department**
   - English
   - History and Political Economy
   - Mathematics
   - Physics

6. **Military Department**
   - Military Science and Tactics

Organization and Mode of Government

Board of Trustees. This board assumes the legal responsibility of the institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations.

The President is the executive head of the College, and has general supervision of all matters within and pertaining to the College, and is charged with executing all rules and regulations passed by the Board of Trustees.

The College is divided into six departments, namely: I. Agricultural and Experiment Station; II. Engineering; III. Chemical; IV. Academic; V. Textile; VI. Military. A Director is at the head of each department, and is responsible to the President for its conduct and success. The departments comprise the various divisions indicated on the preceding page. The divisions are in the immediate charge of the Professors, Associate and Assistant Professors, and Instructors of the respective departments. The President conducts all official business with each department through its Director.

The General Faculty shall consist of the President, Commandant, Professors, Associate and Assistant Professors.

This Faculty shall meet at least once a month, and whenever called by the President, and shall be an advisory body to the President on such matters connected with the instructional work of the college as may be brought before them.

The Discipline Committee shall consist of the President, the Commandant, the Directors of the Agricultural, Engineering, Chemical and Textile Departments, and six Professors nominated by the President and approved by the Board.

This Committee shall try students charged with serious offenses, and shall be empowered to award such punishment for serious offenses as in their judgment shall be merited. The Commandant shall present the case to the Committee, summon witnesses, and in general act as prosecuting attorney, but shall not vote in the findings.

The Discipline Committee shall also constitute the "Senior

Faculty," who shall meet at the call of the President to consider any matter of College interest that he may bring before them. They shall have a right to review any action of the General Faculty.

In order to aid him in his executive duties the President appoints Committees from the Officers of Instruction, to which are assigned certain specified lines of work.

The students are allowed wide latitude in carrying on affairs which concern themselves, such as athletic, literary, musical and social organizations. The aim of the Faculty is to assist in every possible way in making these interests helpful to the student body as a whole. In these matters the disposition is to allow a reasonable amount of time for recreation, and to contribute as far as possible towards making the students contented and happy.

GOVERNMENT OF CADETS

Military Organization and Mode of Government

The following extracts from the Regulations for the Government of Cadets explain the organization and mode of government of the corps:

"1. The President of the College shall have the general command and government of the institution, watching over its administration, discipline and instruction."

"2. The Commandant of Cadets, under the President of the College, has immediate command and control of the corps of cadets in all that pertains to its organization, drill, military police, discipline and administration. He is charged with the instruction of the cadets in the theoretical military course and in all practical military exercises. He will prescribe the order in which the furniture, bedding, books, clothing, equipments, etc. shall be arranged throughout the barracks, and shall, in person, make a minute and thorough inspection of the rooms, furniture, arms and accoutrements, etc. of the cadets at least once each week, and make a report thereon to the President."

"3. The organization of the corps of cadets will, as far as practicable, conform to that of a regiment of infantry of the regular army.

"4. The cadet officers and non-commissioned officers will be appointed by the Commandant of Cadets, subject to the approval of the President of the College. The selection for these positions will be made from those cadets who have been most studious and soldier-like in the performance of their duties, and most exemplary in their general deportment.

"5. As a rule, the cadet captains and lieutenants will be selected from the senior class; the non-commissioned staff and the sergeants from the junior class; and the corporals from the sophomore class."

Leave of Absence

I. Except in cases of emergency or necessity students will as a rule be granted leave of absence only on authorized holidays. On such occasion no student will be granted a leave of absence:

(a) Who has recorded against him more than 20 demerits for the term.

(b) Who is not making satisfactory progress in his classes.

(c) Who has any confinements or extras to be served or who is under arrest.

(d) Who has abused any leave of absence previously given.

II. In case of a holiday, release from study hours will be given on the preceding evening, and study hours will be observed on the evening of the holiday.

III. All communications from parents requesting leave of absence for their sons must be addressed and sent directly to "The Commandant" or to "The President," and must set forth **fully** the reasons for the request. No leave will be granted unless the reasons given are considered satisfactory and sufficient justification for any loss of time or duty involved.

IV. An honorable discharge will be granted to students under age, only upon the written request of the parent or guardian addressed directly to the President of the College. The parent need not give reasons for the request unless he cares to do so.

(The parent's request for an honorable discharge, which means severing the student's connection with the College, must be had in such form as to become a matter of permanent College record. Therefore a letter from a parent to a student expressing willingness for him to get an honorable discharge will not be accepted in lieu of the direct authorization above described. It is very important for the future interests of a student that the circumstances of his withdrawal from the College be made a matter of clear and permanent record.)

V. The President will not consider permits unless they have first passed through the Commandant's Office.

A student who has been granted leave of absence and who stays over the time allowed, unless for sickness or other good and valid reasons acceptable to the President, will lose his place in the College, and will be required to file a new application for admission, and pay the matriculation fee of $5 again before being allowed to re-enter. In case he has been sick, a certificate from the attending physician must be submitted. In every case, notice must be sent to the President or to the Commandant before the student is due to return.

General Regulations

The "Rules and Regulations for the Government of Cadets," a copy of which is furnished each cadet, contains the following:

Cadets must at all times be respectful in their bearing to professors and other officers of the College.

Cadets are subject to military discipline at all times, and are required to take part in drill, guard duty and other military exercises.

All undergraduate students are required to board in the barracks, except those who live with their parents or relatives near enough to attend from their homes.

No trunks, bags or boxes will be allowed in the rooms of cadets. Trunk rooms accessible at stated times are provided for storing trunks.

The practice of hazing is positively forbidden. Any cadet indulging in this practice will be dismissed from the College.

If any cadet shall consider himself wronged by another, or by any officer of the College, he has the right to complain thereof in writing to the President, who will examine into the complaint and take such measures for redressing the wrong as he may deem proper.

All combinations of cadets for the purpose of censuring one of their number are prohibited; also all combinations to defeat the purpose of any regulation of the College.

Cadets are forbidden to keep in their possession any firearms or other weapons not issued by the proper authority.

The College rules require that all students be vaccinated, and parents are advised to have this done before sending their sons away from home.

Any cadet who leaves barracks without authority between taps and reveille shall be dismissed.

Cadets are positively forbidden to use, or have in their possession, intoxicating liquors of any description.

Profanity and gambling are positively forbidden.

The smoking of cigarettes is positively forbidden. During the hours from 9:00 A. M., to 1:00 P. M., and from 2:00 P. M., to 5:00 P. M., cadets will not be permitted to smoke on the campus or in the college buildings.

Cadet "limits" is defined as all the college lands with certain excepted places. Cadets not otherwise prohibited are permitted during release from quarters to be on the above mentioned grounds without special permission.

Demerits will be awarded for every unremoved report, the number depending on the nature and the degree of the offense.

Any cadet receiving 67 demerits during any term shall be brought before the Discipline Committee, and shall be dismissed or less severely punished.

Cadets who receive no demerits for the period of thirty days will be given a credit of eight demerits, to be applied in removing any demerits that accrue during that term.

For infraction of rules cadets are punished according to the gravity of the offense.

Punishment consists of demerits and in addition, confinements (detention of cadet in his room), confinement to barracks or other specified limits, reprimands, extras, (walking equipped as sentinel), reduction to ranks (for officers and non-commissioned officers), arrest, close arrest, suspension, and dismissal from college.

Punishment for ordinary offenses will be awarded by the Commandant of Cadets, and for serious offenses by the President or Discipline Committee, according to the nature of the case.

The College has authority over students except while at home under the control of their parents. They are regarded as students of the College until dismissed, honorably discharged, graduated, or lose their places by reason of overstaying leaves of absence.

The Commandant and his officers have the right to inspect anything in a cadet's room.

ADMISSION OF STUDENTS
COURSES OF STUDY, FEES, ETC.

General Requirements

Candidates for admission must be sixteen years of age.

Students desiring to enter college should apply to the President for application blanks, and these, properly filled out, should be returned to the President as early in the summer as possible, and in no case later than August 14th.

Certificates of good moral character are required of all candidates; and if the candidate comes from another college, this certificate must show that he was honorably discharged.

In the admission of students who have met the requirements of the College, the following will be observed,—

1. Students must undergo a medical examination, and no student will be admitted who is not healthy and free from contagious diseases including tuberculosis.

2. Students will be apportioned among counties in proportion to representation in the House of Representatives, under the following rules and regulations:

(a) Applicants prepared to enter College classes will have preference over those who enter only the preparatory class.

(b) As between applicants of equal preparation, the eldest will have the preference.

(c) Other things being equal, the first applicants will receive permission to enter.

(d) When a county has not sent its quota, the places thus left shall be apportioned among the other applicants.

(e) Provided a sufficient number of applicants from the State to fill the barracks do not apply, then students from other states may be admitted, and when so admitted, may continue in College until they complete their course.

(f) As between the Preparatory students and students applying for the One Year Course, preference shall be given to the latter.

3. Applicants not entering within ten days after the opening of the session will have their rights in the place given to applicants next on the roll.

Students upon arrival at the College at the opening of the session must report at once to the Registrar's office and matriculate before they will be assigned to quarters in the barracks. No student will be admitted to any of the classes or examinations of the College before matriculation and payment of fees. (See page eleswhere.)

Matriculation is equivalent to a pledge to conform to the rules of the College.

Entrance Requirements

For admission to the freshman class a thorough knowledge is required of arithmetic, elementary algebra, English grammar, geography and history of the United States.

REQUIREMENTS FOR ADMISSION TO THE FRESHMAN CLASS

Every student is admitted to the freshman class either on a high school certificate or on an examination.

Admission on certificate

Candidates sending a high school certificate are admitted to the freshman class, provided the work as shown on the certificate consists of ten standard units. This certificate must be on the prescribed form furnished from the Registrar's Office.

Candidates coming from schools having ten or more grades will not be admitted to the freshman class on certificate unless they have fully completed the work of the tenth grade. High school pupils are strongly urged to complete their home school before attempting to enter college.

Students coming from rural schools will be admitted on certificate, provided their certificate is satisfactory to the entrance Committee or if they completed the work equivalent to ten units.

To obtain a credit of one unit there must be five recitations per week for a term of thirty six weeks and each recitation must be forty minutes long. The ten units must be taken from the following groups which are in accordance with the outlines of study as mapped out by the State Board of Education.

Group A

Subject	Units
English	2 1-2
Arithmetic—complete	0
Algebra to quadratics	1
Algebra through progressions	1-2
Plane Geometry	1

Group B

United States History	1
Greek and Roman History	1
Mediaeval and Modern History	1

English History	1

Group C

Physiography or Physical Geography	1
Agriculture	1
Latin	2
Physiology	1
Botany	1

The ten units must be chosen from the above groups as follows:

Group A	4
Group B	1
Group C	3
Electives from A-B-C	2
Total	10

The outlines given below are for the information of candates.

English Grammar and Grammatical Analysis .... 1 unit.

The work as given in Buehler's Grammar will be sufficient.

English Composition and Elementary Rhetoric—with enough literature to make .... 1 1-2 units.

This course should follow Brooks' English Composition, Book I.

Arithmetic—complete .... 0 units.

Milne's Progressive or one of a similar grade.

Algebra to quadratics .... 1 unit.

Algebra through progressions .... 1-2 unit.

Wells' Algebra for Secondary Schools is suggested as a suitable text.

Plane Geometry .... 1 unit.

The course must be the same as that outlined in Wells' New Plane Geometry.

United States History .... 1 unit.

A text of the grade of Thompson's History.

Greek and Roman History .... 1 unit.

Mediaeval and Modern History .... 1 unit
A knowledge of any of the texts adopted by the State Board is required to obtain credits on these.

English History .... 1 unit
Montgomery's English History.

Physical Geography .... 1 unit
As presented in one of the modern textbooks on this subject—as Tarr's. Field work required.

Agriculture .... 1 unit
For a credit of one unit the course should have been guided by some good text as Duggar's Agriculture. Practical experience on the farm will also be counted toward this credit and where this experience has extended over two or more full years it may be accepted as fulfilling the requirements without the text book study.

Latin Grammar and Composition .... 1 unit
First Latin Book.

Four Books of Caesar's Gallic War or equivalent .... 1 unit

Physiology .... 1 unit
A working knowledge of the course as given in a text of the grade of Ritchie's Human Physiology.

Botany—with note book .... 1 unit
Bailey's Elementary Botany should be followed in this course.

Admission on Examination.

All other candidates will be required to stand the entrance examinations at their County Seats or at the College The entrance examinations are held at the County Seats o the second Friday in July along with the scholarship examinations. Applicants are advised to stand the examination then. **Write for copies of old examination questions.**

If an applicant passes on a majority of subjects, he wil be given at the College a re-examination upon those subject in which he failed. If he is unprepared he will be saved th expense of a trip to Clemson.

A careful study of the work outlined below will greatly assist those preparing to take the examinations.

Agriculture.—This examination consists of practical questions that may be easily answered by any one living on the farm. For textbook work Duggar's Agriculture is recommended.

Algebra.—A thorough knowledge of the elementary principles of algebra is required. Students fail on entrance examinations and class work more frequently because of imperfect knowledge of the subject matter passed over, than because they have not gone far enough in the text-book. A thorough mastery of the subject as presented in Wells's Algebra for Secondary Schools, Part One, through quadratic equations will be considered adequate.

Arithmetic.—The applicant is expected to have a thorough practical acquaintance with all of the ordinary principles and operations of arithmetic. Milne's Progressive Arithmetic, Book Three, is recommended as a suitable text-book.

Plane Geometry.—As treated in Wells's New Plane Geometry or an equivalent. The usual theorems and constructions, including the general properties of plane rectilinear figures, the circle, and measurement of angles, similar polygons, areas, regular polygons, and the measurement of the circle. Much stress should be laid on the solution of original exercises.

English Grammar and Composition and Rhetoric.—Applicants are examined in spelling, oral reading, and grammatical forms. They are supposed to have been thoroughly drilled in parsing and sentence analysis as given in Buehler's Grammar or some work of equal grade. A general review of such a text-book during the summer preceding would greatly increase the probability of passing in September. Applicants are required to write short essays on subjects assigned at that time.

Physical Geography.—This subject should be studied as presented in any modern text-book such as Tarr's.

History.—Applicants for the freshman class should have a fair knowledge of Thompson's United States History, or any other modern book of similar grade. The book should be mastered by careful study, with recitations and frequent reviews based upon the text. The relations between history and geography should be constantly kept in view by the study of maps in the text-book, by the use of an historical atlas and by any other available maps.

For the entrance requirements to the one year Agricultural Course see page elsewhere.

Entrance Examinations

Entrance Examinations are held during the second week of the opening of the session, September 18th to 20th, 1913, and all applicants for admission are expected to report promptly at the beginning of this period. Former students, also, who have conditions to remove or work to make up, are required to report at the same time.

Examinations on the subjects required for entrance will be held on the dates shown in the following schedules beginning at 9 a. m.

For Admission to the Freshman Class

Arithmetic—Thursday, September 18, 1913, at 9 a. m.
Algebra—Thursday, September 18, 1913, at 2 p. m.
English—Friday, September 19, 1913, at 9 a. m.
Geography—Friday, September 19, 1913, at 2 p. m.
History—Saturday, September 20, 1913, at 2 p. m.

For Admission to the Preparatory Class

Arithmetic—Thursday, September 18, 1913, at 9 p. m.
English—Friday, September 19, 1913, at 9 a. m.
Geography—Saturday, September 20, 1913, at 9 a. m.

Applicants will be notified of the results of their examinations immediately after chapel services on Monday morning, September 22.

For Admission to Advanced Standing

For admission to advanced standing, applicants must be prepared to stand examinations on the subjects passed over by the lower classes, as indicated in the courses of study scheduled in the Catalog. Such applicants should report with other new students during the regular examination period and arrange with their instructors for the necessary examinations before the opening of the session. Students admitted to advanced standing are allowed a reasonable length of time in which to make up shop work of the lower classes, in case they have not done equivalent work elsewhere.

Fees and Expenses

The regular fees for the session, not including tuition, are as follows:

Incidental fee	$ 5.00
Medical fee	5.00
Breakage fee	3.00
All uniforms	30.50*
Board, washing, heat, light, etc.	90.00
Total	$133.50

These charges must be paid in quarterly installments as follows:

September 10, 1913	$66.00*
November 17, 1913	22.50
January 24, 1914	22.50
April 2, 1914	22.50
Total	$133.50

Tuition students pay $10.00 per quarter additional. Free tuition is allowed only to South Carolina students.

Books, instruments, etc. can be purchased most economically at the **Cadet Exchange** at the following cost when new.

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* Varies slightly each year.

LIST OF TEXT-BOOKS AND MATERIAL NEEDED THROUGH THE FRESHMAN CLASS

These books may be purchased at a local book store before the student leaves home. They may be obtained most economically at the Cadet Exchange at the following cost when new. Usually there is also a number of second hand books which may be purchased much cheaper.

	WHEN BOUGHT and PRICE	TERMS USED
PREPARATORY CLASS		
(All are bought First Term)		
The English Language, Book 2—Kinard and Withers	.55	1-2-3
School Studies in Words—Gilbert	.20	1-2-3
Fifth Reader—Hill	.60	-1-½
Thompson's United States History	70	1-2-3
Advanced Arithmetic—Colaw and Elwood	.55	1-2-3
Algebra for Secondary Schools, Part 1—Wells	.68	1-2-3
New Complete Geography—Maury	88	1-2-3
FRESHMAN CLASS		
(Engineering Course) First Term	**First Term**	
Elements of Agriculture—Warren	1.10	1-2-3
Text-book in Algebra—Wells	1.25	-1-
Lessons in English—Emerson and Lockwood	1.00	1-2-3
Practical Exercises in English—Buehler	.45	1-2-3
Sketch Book—Irving	.25	1-2-
Spelling Book—Benson and Glenn	.30	1-2-3
Academic Dictionary—Webster	1.35	1-2-3
South Carolina History—Chapman	.70	½ of 1
Commercial Geography—Olin	1.00	½ of 1
Engineering Drawing—French	1.80	1-2-3
Drawing Board and Supplies	4.00	1-2-3
Drawing Instruments	$9.60 up	Four Yrs.
Forge Shop Hammer	.38	1-2-3
Second Term	**Second Term**	
Plane and Solid Geometry—Durrell	1.20	-2-3
Essentials of Ancient History—Wolfson	1.35	-2-
Lady of the Lake—Scott	.35	-2-3
Third Term	**Third Term**	
Essentials in Medieval and Modern History—Harding	1.35	-3-
Pen Art Portfolio—Zaner	1.00	-3-

FRESHMAN CLASS (Agricultural Courses) First Term	First Term	
Elements of Agriculture—Warren	1.10	1-2-3
Text-book in Algebra—Wells	1.25	-1-
Lessons in English—Emerson and Lockwood	1.00	1-2-3
Practical Exercises in English—Buehler	.45	1-2-3
Sketch Book—Irving	.25	1-2-
Spelling Book—Benson and Glenn	.30	1-2-3
Academic Dictionary—Webster	1.35	1-2-3
South Carolina History—Chapman	.70	½ of 1
Commercial Geography—Olin	1.00	½ of 1
Mechanical Drawing—Anthony	1.40	1-2-3
Drawing Board and Supplies	3.50	1-2-3
Drawing Instruments	5.50 up	1-2-3
Forge Shop Hammer	.38	1-2-3
Rowe's Commercial and Industrial Bookkeeping	1.40	1-2-3
Second Term	Second Term	
Plane and Solid Geometry—Durrell	1.20	2-3-
Essentials of Ancient History—Wolfson	1.35	2- -
Lady of the Lake—Scott	.35	2-3-
Third Term	Third Term	
Essentials in Medieval and Modern History—Harding	1.35	3- -

Note: The numerals 1, 2. and 3 under the column headed "Terms Used" indicate the first, second or third term

Each student is required to have his own text-books, except in the case of brothers in the same class and course rooming together.

New Students are required to purchase two mattress covers @ $1.00 each, $2.00; two clothes bags @ 25c. each, 50c. These are regulation articles and are secured only at the Cadet Exchange. They will last for the entire course of four years and can often be bought second hand at less than the above figures.

Each student must bring with him four sheets, two blankets, one comfort, six towels, two pillow cases and one pillow. All beds are single width.

Students are advised to provide themselves with a rain coat and a pair of rubber shoes.

A fee of $2.00 is charged for a diploma, payable before graduation.

Settlement of College Fees

Remittances should be made in cash, by money order, New York exchange, or by local check, made payable to Dr. P. H. E. Sloan, Treasurer, Clemson College.

Breakage

The breakage fee of $3.00 is a deposit to cover damage or destruction of college property when individual responsibility can not be located. Any amount remaining to the credit of a student at the end of the session will be refunded. A student will be required to pay directly to the Treasurer for any damage done to college property for which he is personally responsible. The occupants of a room will be held responsible for any damage to property in the room.

Rules Governing Refunds to Students

Refunds will be made to students under the following rules:

1. Out of the amount deposited for the full uniforms, a refund will be made for any garments that are accepted by the Commandant as serviceable. Parents will be notified of the amount refunded under this rule.

2. The refund for board, laundry, heat, light and water will be at the rate of $10.00 per month. No refund will be made for interruptions of less than one month.

3. A refund of all moneys, except 50c. per day for board, etc., will be made to any student who leaves College within ten days of the date of his matriculation, provided however that no refund can be made for uniform if same has been ordered.

4. Any balance of the $3.00 breakage fee at the end of the session will be sent to parents after the close of the session in June.

5. No refunds of medical or incidental fees will be made unless a student withdraws within ten days after date of matriculation.

6. No refund of the quarterly tuition payment of $10.00 will be made unless the student withdraws from College with-

in ten days of the beginning of the quarter in which the fee is paid.

7. As a rule, no refund for lost or damaged laundry will be allowed. The College exercises every possible care to avoid loss or damage, but at the low rate charged, equivalent to less than one-fourth the price of commercial laundries, there is no margin of profit out of which to make good an unavoidable loss or damage.

8. The College will not assume responsibility foı articles lost or stolen from cadets' rooms in the barracks.

Optional Expenses

The expenses above listed are all that is required by the College. For the information of parents the following list of regular optional expenses connected with student activities is given:

Subscription to the "Chronicle"	$1.00
Subscription to the "Tiger"	1.00
Subscription to the "Annual"	2.50
Membership fee in the Literary Societies for new members	$2.00-3.00
Membership fee in the Literary Societies for old members each year	1.00
Lyceum ticket	1.00
Membership fee Y. M. C. A.	2.00
Extra attractions such as "Glee Club," "Coburn Players," etc.	1.50
All athletic contests such as Track Meets, Base Ball and Foot Ball	$3.00-$5.00

Free Tuition

AN ACT to Require the Authorities of all Institutions of Learning Supported or Controlled in Whole or in Part by the State, to Report to the General Assembly the Names of All Students at Such Institutions and Whether They are Pay, Beneficiary or Scholarship Students; and to Require the Auditors of All the Counties to Keep a Record and File of all Affidavits of Inability to Pay Tuition Made Before Them, as Now Required by Law.

Section 1. Be it enacted by the General Assembly of the State of South Carolina, That from and after the approval of this Act, the authorities of all colleges or institutions of learning supported in whole or in part by the State, shall report to the General Assembly at its annual meeting the names of all students, with the post office address of each and whether such students are pay, beneficiary or scholarship students.

Section 2. That the Auditors of the several Counties of this State be required to keep a record and file of all affidavits made before them, as now required by law, of inability on the part of the parent, guardian or trustee to pay tuition.

Section 3. That all Acts and parts of Acts inconsistent with this Act be, and the same are hereby, repealed.

Approved the 24th day of February, A. D., 1906.

In accordance with this law, residents of South Carolina are granted free tuition upon presentation of a certificate, signed by the County Auditor.

Certificate blanks will be furnished upon application to the President.

A new certificate must be furnished each session.

SCHOLARSHIPS

Statement of the State Laws and College Rules Governing the Award of Four-Year Scholarships

1. Each county is allowed as many scholarships as it has representatives in the General Assembly. The total number for the State is one hundred and sixty-eight. The number of vacancies in any particular county can be learned by making inquiry of the President of Clemson College.

2. Scholarship students are required to take one of the Agricultural Courses, except that one scholarship per county is allowed in the Textile Course. Scholarship students are not permitted to take the Engineering Courses.

3. Each scholarship pays $100.00 per session in cash, and allows free tuition, worth $40.00 more. The regular scholarship is good for four consecutive years, unless terminated by the student's failure to maintain himself in his classes, and comply with the rules of the College.

4. The scholarships are awarded on competitive examinations. The examinations are conducted by the County Superintendents of Education at the county seats, on the second Friday in July, from 9 A. M. to 4 P. M.

5. The examination questions are prepared, and the papers are graded, by the Clemson faculty. This faculty reports the winners by number to the State Board of Education, and the State Board makes the award in conformity to the above recommendations.

6. The examinations are on the common school branches. An applicant must meet the entrance requirements of the freshman class to pass.

7. The College has a right to reject any applicant, who in respect to age (16 years at the time of entering), examination papers, or in any other respect, fails to meet its requirements for admission.

8. The following are not eligible for scholarship appointments:

(a) A person who during the current year has won or holds a scholarship at another State institution.

(b) A person who has been in attendance at Clemson College or "any other institution of higher learning known as a College or University," provided however, that this condition shall not apply if there are no other eligible applicants for the scholarship.

(c) A person who has forfeited a scholarship at Clemson College or any other State institution by failure to maintain himself.

9. No applicant shall be debarred from standing the examinations because he has failed to fill out the necessary certificate of financial inability as required by law, but this cer-

tificate must be in the hands of the President of Clemson College before the applicant can be considered eligible for a scholarship. (The blank certificate form can be obtained at any time from the President of Clemson College, or from the County Superintendent of Education on the day of the examinations.) It must reach the President not later than noon of July 20th, otherwise the applicant will be eliminated from the competition.

10. If a scholarship vacancy shall occur, and the county to which it belongs has no eligible applicant, the Clemson faculty may fill the vacancy by awarding the scholarship to some eligible applicant from another county. However, any such appointment shall last not longer than one session.

Note.—Scholarship students will therefore have to deposit $33.50 with the Treasurer at the beginning of the session.

Distribution of Scholarships

The one hundred and sixty-eight four-year scholarships provided in this institution by the Legislature are apportioned to the counties of the State according to law as follows:

Abbeville	4	Greenwood	4
Aiken	4	Hampton	2
Anderson	7	Horry	3
Bamberg	3	Jasper	2
Barnwell	4	Kershaw	3
Beaufort	3	Lancaster	3
Berkeley	3	Laurens	4
Calhoun	2	Lee	3
Charleston	9	Lexington	4
Cherokee	3	Marion	3
Chester	3	Marlboro	4
Chesterfield	3	Newberry	4
Clarendon	4	Oconee	3
Colleton	3	Orangeburg	6
Darlington	4	Pickens	3
Dillon	3	Richland	6
Dorchester	2	Saluda	3
Edgefield	3	Spartanburg	8
Fairfield	3	Sumter	4
Florence	4	Union	3
Georgetown	3	Williamsburg	4
Greenville	7	York	5

ONE YEAR AGRICULTURAL SCHOLARSHIPS.

The holders of these scholarships are required to take the One Year Agricultural Course described elsewhere in this catalog.

The Financial Certificate required of applicants for these scholarships is the same as that required for the regular four year scholarships.

Section 1. Beneficiary Scholarships for Clemson.—There are hereby established and created fifty-one beneficiary agricultural scholarships in the Clemson Agricultural College of South Carolina, said scholarships to be of the value of one hundred dollars ($100) per annum, and free tuition, and to be awarded so that there shall be one scholarship to each county, and seven scholarships from the State at large.

Sec. 2. The said scholarships shall be open to any young man a native of South Carolina, eighteen (18) years old or over, who has spent not less than three years in the active practice of farming, consideration being given to the need and worth of the appplicant, and to his agricultural knowledge as shown by suitable examinations. All applicants shall stand such examinations as shall be prescribed by the proper authorities of the Clemson Agricultural College, and these examinations shall be held at the same time and in accordance with the general laws governing the examinations for other scholarship students.

Sec. 3. Board of Education to Appoint.—The faculty of the said Clemson Agricultural College, or committee designated by the Board of Trustees for that purpose, shall recommend to the State Board of Education for appointment to the scholarships one of the young men who has successfully passed the examination and is otherwise qualified.

Sec. 4. How Scholarships to Be Paid For—Term of Scholarships.—The said scholarships shall be paid from the income of the said Clemson Agricultural College as now provided by law, and each shall continue for a term not exceed-ing one year, or for such length of time as the beneficiary shall be able to maintain himself as a student of the college, and the said sum of ($100) one hundred dollars per annum shall be placed to the credit of each beneficiary and applied to the payment of his board and other necessary expenses.

Note: The holders of these scholarships will be required to make a deposit of about $17.55 at the College Treasurer at the beginning of the session. The exact amount of this deposit is determined by the cost of the uniform. See a full description of the One Year Agricultural Course and the costs as given elsewhere in this publication.

The Southern Railway Scholarship

The Southern Railway gives to a young man, living in a county traversed by its lines (including the Blue Ridge Railway), a four year agricultural scholarship which pays about $200.00 per year.

This scholorship was awarded by competitive examination. It will be open again in 1915.

Write to Mr. M. V. Richards, Land and Industrial Agent, Southern Railway, Washington, D. C. for full information, or to the President, Clemson College, S. C.

Grades and Reports

Reports of class standing and discipline are sent to the parents at intervals of approximately one and one half months throughout the session. During 1913-1914 these reports will be made up for periods ending on the following dates, and will usually be mailed to parents about one week later **October 24, and December 20*, 1913; February 6 and March 21*, 1914; April 24 and June 5*, 1914.**

Dates marked with an asterisk are approximate, depending upon the time that the term examinations end. The grades sent out on these three dates are a combination of the examination grade with the average grade of two months.

Examinations are held at the close of each term, and reports are sent to parents, giving the results of these examinations and also the averages of monthly grades in all subjects pursued by the student. The student must attain at least the pass-mark, 60 per cent. on both examination grade and term average in each term separately and in every subject in his course, in order to be entitled to promotion to the next higher class.

The names of students who attain to a certain standard fixed by the faculty will have their names publicly announced, printed in one or more College publications, and notification will be sent to their parents.

Rules for Re-examination and Promotion

1. No re-examination shall be granted to a student in a subject in which he has made a class mark of less than 60 per cent. for the term, or an examination mark of less than 40 per cent.

No student shall be allowed re-examination who makes less than 60 per cent. on more than three term examinations during the session, or more than two examinations for one term, provided that if all three failures are in the same subject, he may be allowed re-examination in one additional subject for one term.

2. A student who fails on re-examination or term class mark shall be required to take that work over with the class, and schedule it first.

3. A student, who for any reason, fails to take his re-examination at the scheduled time, shall not be allowed to take the examination except by permission of the general faculty.

4. All re-examinations, except for seniors, shall be held during the first five days of the session, provided however, that if a student has missed all term examinations on account of sickness he may be granted re-examinations at

special times suitable to the faculty and to the instructors concerned.

5. Students who are granted special privileges to make up work shall be required to report at the next scheduled period after the privilege is granted, and a list of such delinquents shall be furnished each instructor concerned, and deficient subjects in the lower class shall be made up first.

6. A failure in practical work shall have the same weight as a failure in a theoretical subject.

7. A student below the junior class shall not be granted an irregular course.

8. A student taking the class over forfeits all previous records in that class.

9. No student shall take over a class more than once.

10. Each student shall be required to make up all deficiencies before he is given permission to change his course, or he must take these deficient subjects along with his new course, and he shall be classed as a conditioned student until these deficiencies are removed.

11. No student shall be promoted from one class to another who has a failure in more than one subject for the preceding year, and a student who is promoted with work behind shall be classed as a conditioned student, and shall be required to schedule first the subjects on which he is deficient.

12. No student who has work to make up shall be promoted to the senior class.

PRESCRIBED COURSES OF STUDY

The college offers the following six regular courses of study, each leading to the degree of Bachelor of Science (B. S.), the course pursued being designated on the diploma.

I. AGRICULTURE
II. CHEMISTRY
III. MECHANICAL AND ELECTRICAL ENGINEERING
VI. CIVIL ENGINEERING
V. TEXTILE INDUSTRY
IV. ARCHITECTURAL ENGINEERING

In addition to these courses, special shorter courses are offered in the Agricultural, the Engineering and the Textile departments, but these do not lead to any degree.

Course I. Agriculture

The course in Agriculture, supplemented by work in mathematics, English, political economy, history, and the natural sciences, allows no differentiation during the first three years. Its object is to give the student such a broad general knowledge of the subject that he will have a solid foundation for specialization in his senior year and will be able to choose intelligently at the end of his junior year which of the various branches he desires to study in more detail.

In the senior year the student will elect a major and minors, the former requiring five hours of recitation work and six hours of laboratory each term, and the latter requiring two hours of recitation and two of practical or laboratory work the first term and four hours of recitation and six of practical the second and third terms.

These majors are offered as electives by seven divisions.

Division A gives special attention to crops, soils, plant breeding. and farm machinery.

Division B, botany, prepares the student for Experiment Station work, investigation, and teaching.

Division C, chemistry, fits the student for experiment station, fertilizer, and general agricultural chemical work.

Division D, animal husbandry, embraces dairying, judging, breeding, feeding, and care of stock.

Division E, entomology, familiarizes the student with insects, especially those injurious to all kinds of plant life.

Division F, veterinary science, instructs in the elements of veterinary medicine and the care of animals.

Division G, horticulture, teaches gardening, fruit growing, truck raising, and landscape gardening.

AGRICULTURE

Freshman Class

	Hours per week				Hours per week		
Theoretical	1st Term	2nd Term	3rd Term	Practical	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Forge (251)	2	2	2
English (501)	5	5	5	Wood Work (271)	2	2	2
History (511-513)	3	3	3	Mechanical Drawing (242)	2	2	2
Agriculture (100)	2	2	2	Freehand Drawing (240)	2	2	2
				Botany (171-172-173)	2	2	4
	15	15	15	Bookkeeping (540-541)	2	2	0
				Drill (601)	3	3	3
					15	15	15

Sophomore Class

Mathematics (522)	2	3	0	Physics (533)	0	2	2
English (502)	3	3	3	Chemistry (301)	3	2	2
Chemistry (300)	3	3	3	Civil Engineering (232a)	3	0	0
Physics (530)	3	3	3	Ento. and Zoology (140-142)	4	4	2
Civil Engineering (232)	3	0	0	Botany (175-176)	0	4	4
Ento. and Zoology (140-142)	1	2	3	Agriculture (101)	0	0	2
Botany (175-176)	0	1	1	Physiography (117)	2	0	0
Agriculture (101)	0	0	2	Drill (601	3	3	3
	15	15	15		15	15	15

Junior Class

English (503)	2	2	2	Entomology (143)	2	0	0
History (514)	2	2	2	Chemistry (303-305)	3	3	3
Chemistry (304)	2	2	2	Horticulture (121-122)	2	0	2
Horticulture (121-122)	2	0	2	Animal Husbandry (150)	0	0	3
Animal Husbandry (150-152)	0	2	2	Dairying (162)	3	3	0
Dairying (161)	2	2	0	Vet. Science (131)	0	4	0
Vet. Science (130-131)	2	2	2	Agriculture (102-103)	2	2	2
Agriculture (102)	2	2	2	Forestry (174)	0	0	2
Mil. Science (600)	1	1	1	Drill (601)	3	3	3
	15	15	15		15	15	15

Senior Class

English (504)	2	2	2	Bacteriology (177)	4	0	0
Economics (515)	2	2	2	Drill (601-602)	3	3	3
Geology (112)	2	2	2				
Bacteriology (177)	2	0	0				
	8	6	6		7	3	3
Major Subject	5	5	5	Major Subject	6	6	6
Minor Subjects	2	4	4	Minor Subjects	2	6	6
	15	15	15		15	15	15

Course II. Chemistry

This course is intended to prepare the student for engaging in manufacturing operations involving chemistry, or for employment as chemist in commercial or fertilizer inspection laboratories, and in Experiment Station or U. S. Government service. A student completing this course satisfactorily will also be well equipped to undertake advanced work in chemistry and to teach the subject.

The first year of the course is the same as in Course I., Agriculture, (see pages 54 and 55). Beginning in tthe sophomore year, and continuing throughout this course, increasing stress is laid upon chemistry, until in the senior year all the practical work, with the exception of military drill, is devoted to analytical chemistry. With the above stated end in view the student will be given an opportunity to become familiar with many methods of analysis commonly used in commercial and general laboratory work. He will be permitted and encouraged to undertake as many such methods as he can perform without interfering with that indispensable fundamental instruction necessary for every properly trained analytical chemist.

The student is well grounded in English, German, mathematics, physics, mineralogy, chemical geology and chemistry, the emphasis is being given to chemistry, especially during the last two years. German has been introduced into this course because a reading knowledge of this language is almost indispensable to the student who wishes to undertake advanced work in chemistry, or to stand examinations for positions in the U. S. Government service.

CHEMISTRY

Freshman Class

Theoretical.	Hours per week 1st Term	 2nd Term	 3rd Term	Practical.	Hours per week 1st Term	 2nd Term	 3rd Term
Mathematics (520-521)	5	5	5	Forge (251)	2	2	2
English (501)	5	5	5	Wood Work (271)	2	2	2
History (511-513)	3	3	3	Freehand Drawing (240)	2	2	2
Agriculture (100)	2	2	2	Mechanical Drawing (242)	2	2	2
				Botany (171)	2	2	4
				Bookkeeping (540-541)	2	2	0
				Drill (601)	3	3	3
	15	15	15		15	15	15

Sophomore Class

Mathematics (522-4-5)	5	5	5	Chemical Laboratory (301)	4	4	4
English (502)	3	3	3	Chemical Laboratory (307)	0	2	2
History (514)	3	2	0	Chemical Laboratory (311)	0	2	2
Chemistry (300)	3	3	3	Mechanical Drawing (243)	2	2	2
Physics (531)	2	2	2	Bacteriology (177)	4	0	0
Chemistry (307)	0	0	2	Phys. Laboratory (534)	0	0	2
				Drill (601)	3	3	3
	15	13	15		13	15	15

Junior Class

Mathematics (525-527)	4	0	0	Assaying (303)	2	0	0
English (503)	2	2	2	Organic Laboratory (308)	0	4	2
Chemistry (304)	2	2	4	Chem. Laboratory (303)	6	6	6
Chemistry (306)	2	2	2	Phys. Laboratory (535)	2	2	2
Physics (532)	2	2	2	Mineralogy (111)	2	2	2
German (550)	0	2	2	Drill (601)	3	3	3
Mineralogy (111)	2	2	2				
Mil. Science (600)	1	1	1				
	15	13	15		15	17	15

Senior Class

English (504)	2	2	2	Chem. Laboratory (305-311)	12	12	12
Economics (515)	2	2	2	Drill (601-602)	3	3	3
Chemistry (302)	2	2	2				
Chemistry (309)	2	2	2				
Metallurgy (310)	2	2	2				
Chem. Geology (114)	2	2	2				
German (551)	3	3	3				
	15	15	15		15	15	15

Course III. Mechanical and Electrical Engineering

This course is designed to fit young men for positions in the various departments of these professions. It attempts, by practical and theoretical instruction, to lay a solid scientific foundation upon which the student may build rapidly after graduation. The experience necessary to make a successful engineer can not be acquired in a college course, but the technical graduate usually distances his uneducated competitors in the acquirement of practical knowledge and experience.

Within the department are taught mechanics, and mechanical and electrical engineering. Along with the theoretical instruction in these subjects, practice is given in well equipped laboratories.

Shop instruction is given in carpentry, turning, and pattern-making; in moulding; chipping and filing, and the use of machine tools. The purpose of this instruction is not to turn out skilled artisans, but to train those faculties of mind which can best be reached through the work of the hand.

The work in drawing is made one of the features of the course.

MECHANICAL—ELECTRICAL

Freshman Class

	Hours per week				Hours per week		
Theoretical.	1st Term	2nd Term	3rd Term	**Practical.**	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Forge (250)	3	3	3
English (501)	5	5	5	Wood Work (270)	4	4	4
History (511-513)	3	3	3	Freehand Drawing (240)	2	2	2
Agriculture (100)	2	2	2	Mechanical Drawing (241)	3	3	3
				Drill (601)	3	3	3
	15	15	15		15	15	15

Sophomore Class

Mathematics (522-4-5)	5	5	5	Drawing (243)	2	2	2
English (502)	3	3	3	Physics (534)	0	0	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	2	2	2
Physics (531)	2	2	2	Foundry (252)	2	2	2
Civil Engineering (233)	0	0	3	Descriptive Geometry (230)	2	2	0
History (514)	3	2	0	Civil Engineering (233a)	0	2	2
				Wood Work (272)	2	2	0
				Drill (601)	3	3	3
	16	15	16		13	15	13

Junior Class

Mathematics (525-527)	5	3	3	Mechanical Drawing (246)	2	2	2
English (503)	2	2	2	Physical Laboratory (535)	2	2	2
Physics (532)	2	2	2	Machine Shop (260)	4	4	4
Electrical Eng. (200)	3	2	2	Practical Mech. (261)	1	1	1
Mechanism (210)	2	0	0	Electrical Lab. (201)	3	3	3
Mechanics (211)	0	3	2	Drill (601)	3	3	3
Geology (113)	0	2	2				
Mil. Science (600)	1	1	1				
	15	15	15		15	15	15

Senior Class

English (504)	2	2	2	Electrical Lab. (203)	4	4	4
Economics (515)	2	2	2	Mechanical Lab. (214)	4	4	4
Electrical Eng. (202)	5	5	5	Drawing (248)	4	4	4
Mechanical Eng. (213)	3	4	5	Drill (601-602)	3	3	3
Mechanics of Eng. (212)	2	2	0				
	14	15	14		15	15	15

Course IV. Civil Engineering

This course is intended to prepare young men for entrance upon professional practice in some of the many branches of civil engineering, and also to meet the needs of those who, having been engaged in engineering work without a course of instruction, desire to equip themselves for more successful competition with those who have had such instruction.

In connection with the technical studies, liberal training is given in English, history, economics, pure mathematics, and the physical sciences. The course will also be found to embrace about the same amount of drawing, shop work, mechanical engineering and mechanical laboratory practice as the other engineering course.

The distinctive work pursued by students in this course includes the study of land surveying and plotting, topographic surveying and mapping; location, construction, and maintenance of roads, railroads, streets, and pavements; strength of materials, masonry construction, foundations on land and in water; analytic and graphic investigations of stresses in girders, roofs and bridges, and the design of these structures; the principles of hydraulics as applied to dams, reservoirs, canals, municipal water-works, and the development of water power.

CIVIL ENGINEERING

Freshman Class

	Hours per week				Hours per week		
Theoretical.	1st Term	2nd Term	3rd Term	Practical.	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Forge (250)	3	3	3
English (501)	5	5	5	Wood Work (270)	4	4	4
History (511-513)	3	3	3	Free Hand Drawing (240)	2	2	2
Agriculture (100)	2	2	2	Mechanical Drawing (241)	3	3	3
				Drill (601)	3	3	3
	15	15	15		15	15	15
Sophomore Class							
Mathematics (522-4-5)	5	5	5	Mechanical Drawing (244)	2	2	2
English (502)	3	3	3	Physics (534)	0	0	2
Chemistry (300)	3	3	3	Chemical Laboratory (301)	2	2	2
Physics (531)	2	2	2	Foundry (252)	2	2	2
Civil Engineering (233)	0	0	3	Descriptive Geometry (230)	2	2	0
History (514)	3	2	0	Civil Engineering (233a)	0	2	2
				Wood Work (272)	2	2	0
				Drill (601)	3	3	3
	16	15	16		13	15	13
Junior Class							
Mathematics (525-527)	5	3	3	Mechanical Drawing (247)	2	2	2
English (503)	2	2	2	Physical Laboratory (535)	2	2	2
Physics (532)	2	2	2	Machine Shop (260)	4	4	4
Civil Engineering (235)	3	2	3	Practical Mechanics (261)	1	1	1
Mechanism (210)	2	0	0	Civil Eng. (Field) (235a)	3	3	3
Mechanics (211)	0	3	2	Drill (601)	3	3	3
Geology (113)	0	2	2				
Mil. Science (600)	1	1	1				
	15	15	15		15	15	15
Senior Class							
English (504)	2	2	2	Civil Engineering (236a)	4	4	4
Economics (515)	2	2	2	Mech. Laboratory (214)	4	4	4
Civil Engineering (236)	5	5	5	Drawing (249)	4	4	4
Mechanical Engineering (213)	3	4	5	Drill (601-602)	3	3	3
Mechanics of Eng. (212)	2	0	0				
Electricity (204)	0	2	0				
	14	15	14		15	15	15

Course V. Textile Industry

The course in Textile Industry is designed to give the student sound training, both theoretical and practical, in the sciences upon which manufacturing processes are based. The curriculum of the course recognizes that in a profession of so many aspects a broad general cultivation, a liberal training in design, and a thorough knowledge of the underlying principles are necessary for its successful practice.

The first two years are taken up with a broad general training along scientific and mechanical lines, while from the beginning of the junior year the work takes on a distinctly professional character. The practical work is carried on for the purpose of developing in the student habits of accurate observation, and of bringing to his consideration not only methods of fundamental importance, but also the questions of economy of time, precision of results, and attention to details.

This course does not presume to fit one for the management of a mill, but the graduate is in possession of such information, and has acquired such experience and knowledge that he may look forward to a successful career as manufacturer, mill architect, or technical chemist, provided he has the necessary energy, application and tact, and a willingness to begin at the bottom.

TEXTILE

Freshman Class

	Hours per week				Hours per week		
Theoretical.	1st Term	2nd Term	2nd Term	**Practical.**	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Forge (250)	3	3	3
English (501)	5	5	5	Wood Work (270)	4	4	4
History (511-513)	3	3	3	Freehand Drawing (240)	2	2	2
Agriculture (100)	2	2	2	Mechanical Drawing (241)	3	3	3
				Drill (601)	3	3	3
	15	15	15		15	15	15

Sophomore Class

Mathematics (522-4-5)	5	5	5	Foundry (252)	2	2	2
English (502)	3	3	3	Wood Work (272)	2	2	0
History (514)	3	2	0	Desciptive Geometry (230)	2	2	0
Chemistry (300)	3	3	3	Chemical Laboratory (301)	2	2	2
Physics (531)	2	2	2	Physical Laboratory (534)	0	0	2
Civil Engineering (233)	0	0	3	Civil Engineering (233a)	0	2	2
				Mech. Drawing (243)	2	2	2
				Drill (601)	3	3	3
	16	15	16		13	15	13

Junior Class

Mathematics (525-527)	4	0	0	Machine Shop (260)	2	2	2
English (503)	2	2	2	Practical Mechanics (261)	1	1	1
Designing (410)	2	2	2	Weaving (412)	4	4	4
Carding and Spin. (400-402)	2	2	2	Carding and Spinning (400-2)	2	4	4
Textile Chemistry (420)	0	2	3	Textile Chemistry (421)	3	2	2
Physics (532)	2	2	2	Drill (601)	3	3	3
Mechanism (210)	2	0	0				
Mechanics (211)	0	3	2				
Mil. Science (600)	1	1	1				
	15	14	14		15	16	16

Senior Class

English (504)	2	2	2	Carding and Spin. (403-405)	4	2	4
Economics (515)	2	2	2	Weaving (414)	4	4	4
Mechanical Engineering (213)	3	0	0	Mech. Laboratory (215)	0	3	2
Carding and Spin. (403-405)	2	3	2	Textile Chemistry (423)	4	4	2
Designing (411)	2	3	3	Drill (601-602)	3	3	3
Weaving (413)	2	2	2				
Textile Chemistry (422)	2	2	2				
Mill Economics (406)	0	0	2				
	15	14	15		15	16	15

Course VI. Architectural Engineering

This course is established to comply with an increasing demand in the South for men trained in architectural design, building construction, and allied subjects. The course as planned covers a period of four years' study, of which, the first two are devoted to technical subjects similar to the other engineering courses, except that drawing, and more especially descriptive geometry, are strongly emphasized in their special application to architectural drawing and rendering. It is recognized that architecture must be treated as an art, as well as a science, and as drawing and design are the most essential elements in an architect's professional work, the greatest possible amount of time is given to them in the junior and senior years. Throughout the entire course, special attention is paid to the engineering branch of the architect's profession. A thorough study is made of the materials used in construction. Analytic and graphic investigations of stresses in girders, roofs, etc., are made in detail. The various systems of heating and lighting are also studied.

The successful architect must have, not only a thorough knowledge of design and building construction, but also a broad sympathy with all intellectual culture. In order to obtain this, the student is encouraged to read literature, history, and science.

ARCHITECTURE

Freshman Class

	Hours per week				Hours per week		
Theoretical.	1st Term	2nd Term	3rd Term	**Practical.**	1st Term	2nd Term	3rd Term
Mathematics (520-521)	5	5	5	Forge (250)	3	3	3
English (501)	5	5	5	Mechanical Drawing (241)	3	3	3
History (511-513)	3	3	3	Free Hand Drawing (240)	2	2	2
Agriculture (100)	2	2	2	Wood Work (270)	4	4	4
				Drill (601)	3	3	3
	15	15	15		15	15	15

Sophomore Class

Mathematics (522-4-5)	5	5	5	Foundry (252)	0	2	0
English (502)	3	3	3	Chem. Laboratory (301)	2	2	2
Chemistry (300)	3	3	3	Physics (534)	0	0	2
Physics (531)	2	2	2	Arch. Drawing (280)	2	2	2
Desciptive. Geometry (231)	0	0	2	Freehand Drawing (281)	2	3	4
History (514)	3	2	0	Descrip. Geometry (231a)	4	3	2
				Drill (601)	3	3	3
	16	15	15		13	15	15

Junior Class

Mathematics (525-527)	5	3	3	Architectural Design (283)	6	5	8
English (503)	2	2	2	Freehand Drawing (284)	4	2	0
Physics (532)	2	2	2	Civil Engineering (234a)	0	3	0
Civil Engineering (234)	2	0	0	Min. Laboratory (110)	0	0	2
Bldg. Construction (282)	3	2	3	Physical Laboratory (535)	2	2	2
Mechanics (211)	0	3	2	Drill (601)	3	3	3
Geology (113)	0	2	2				
Mil. Science (600)	1	1	1				
	15	15	15		15	15	15

Senior Class

English (504)	2	2	2	Architectural Design (290)	8	12	12
Economics (515)	2	2	2	Testing Laboratory (216)	4	0	0
History of Arch. (285)	2	2	2	Drill (601-602)	3	3	3
Mechanics of Eng. (212)	2	2	0				
Arch. Eng. (286)	4	2	4				
Building Construction (287)	2	2	2				
Heat and Sanitation (288)	0	2	2				
Profes. Practice (289)	1	1	1				
	15	15	15		15	15	15

SHORT COURSES

Special Courses

Besides students in the regular undergraduate courses, there may be farmers and others of mature age, including graduates of other institutions, who desire to avail themselves of the special privileges offered by the College. To such persons the opportunity is offered, under the advice of the director of the department in which work is contemplated, to pursue special lines of study or investigation in any of the subjects taught in the College, provided attention can be given to them without detriment to the regular classes. Such special students will be admitted after they have satisfied the director of the department that they are qualified to pursue the work with profit.

Special students are excused from military duty, but are subject to the general regulations of the College requiring good conduct and diligent prosecution of course selected. They are not admitted to barracks, but rooms and board may be secured in the community at reasonable rates. They will be required to pay the usual fees, except the price of uniform and board in barracks.

Special Post Graduate Textile Course

This course is, in general, a continuation of the regular course with the addition of such subjects as will lead to a proper understanding of industrial affairs. Frequent discussion of the subjects treated, and wide reading on assigned topics will be special features of the course. The subjects taken up will include combing, mule spinning, mill construction and organization, assembling of machinery, Jacquard weaving, building of Jacquard harnesses, loom fixing, designing, dyeing, manufacture and technical analysis of chemicals and other products used in the textile industry; and sociology in so far as it touches upon mill life, welfare work and labor problems.

Special Cotton Grading Course

This course begins with the winter term, January 13, 1914, and continues for four weeks. All of the important cottons of the world are studied, but most of the practice is with the varieties grown in the United States, and especially those grown in South Carolina. Constant practice is given with a full line of samples—including the tinges and stains. A set of arbitration samples is used for reference and comparison. The physical properties of the fibre are studied with a microscope, and its diameter, length, strength and other spinning qualities determined. The students are given the results of experiments made by the textile students with various grades. The cost of this Course is $10.00.

Textile Short Course

To meet the demands of southern conditions for a class of young men trained in the finer details of cotton manufacture, a special two-year course has been arranged to accommodate a limited number of students who may not be in a position to take the regular four-year textile course.

The course includes mathematics (beginning algebra), English, freehand and mechanical drawing, carding, spinning, weaving and designing, is thoroughly practical and allows the greater portion of the student's time to be devoted to the study of textiles in its several branches.

To pursue his course successfully the student must be well grounded in arithmetic, and should be capable of expressing his thoughts clearly in writing. The student seeking admission to this course must present himself at the College during the regular entrance examination period, September 11 to 13, 1913, and satisfy his instructors that he is prepared to undertake the work. No student will be admitted after that time. Students must be at least 18 years of age, and must have had at least one year's experience in some cotton mill. Students who have failed in the regular College courses will not be allowed to change to this course. No diploma is conferred upon the completion of this work, but the student receives a certificate showing that he has finished the course.

COURSE OF STUDY

Special Textile Course

First Year

	Hours Per Week		
Theoretical	1st term	2nd term	3rd term
Mathematics (begins algebra)	5	5	5
Freshman English	5	5	5
Carding and Spinning (theory)	2	2	2
Carding and Spinning (practical)	3	3	3
Mechanical Drawing	3	3	3
Designing	3	3	3
Weaving	6	6	6
Freehand Drawing	3	3	3
	30	30	30
Second Year			
Mathematics (complete geometry)	5	0	0
Sophomore English	3	3	3
Chemistry	3	3	3
Carding and Spinning (theory)	2	2	2
Carding and Spinning (practical)	6	6	6
Chemical Laboratory	2	2	2
Designing	2	3	3
Cloth Analysis and Jacquard Designing	2	3	3
Weaving	5	8	8
	30	30	30

FARMER'S SHORT COURSE IN AGRICULTURE

Four Weeks Course

It is an established fact that a farm can no longer be run successfully in the old-time haphazard fashion. Science and brains skillfully applied to farming so increase the yield and improve its quality as to make some knowledge of the underlying principles of scientific farming essential to the successful farmer of today. While it is realized that the four years course is none too long to give a boy the foundation which will insure success in farming, it is clearly seen that there are many practical farmers who have neither the time nor the means to devote four years to a college course, who would be greatly benefited by a few weeks spent at the college. To meet such a demand the college offers a short course of four weeks beginning January 13, 1914. Much helpful information will be given as to recent improvements in machinery and methods. Agronomy, including plant growth, soil, fertilizers, tillage, implements and farm crops; animal husbandry, including breeds of animals, breeding, feeding, care of animals and stock judging; together with some work in horticulture, dairying, veterinary science and entomology, will comprise the course. Opportunity for special work in dairying, horticulture, or cotton grading, will be given to any desiring it.

Write to the Registrar for detailed information.

The cost of this Course is $10.00.

Work-Boy Course in Agriculture

In order to assist worthy and needy young men to obtain a practical education along Agricultural lines, and at the same time to furnish the College farm with skillful, reliable and intelligent labor, the Trustees have authorized the organization of a Work-Boy Course in Agriculture.

Town boys or others who have not followed farming will positively not be admitted to this class, for the reason that they would be unable, because of their lack of experience, to follow it successfully.

A knowledge of reading, writing and arithmetic is the only scholastic requirement for admission.

Any young farmer or farmer's son, not less than eighteen years of age, without the means to pay for an education, who is in sound vigorous health, and willing to enter into an agreement to work and study faithfully, and, if satisfactory to the College authorities, remain for the two years necessary to complete the course, may become an applicant.

Write to the Registrar for detailed information.

The One-year Agricultural Course

The purpose of the course is to teach the simple scientific principles upon which good farming rests. Its purpose is to take a young man already a farmer and make him a better farmer. It is not intended to train men who are without agricultural experience to become farmers, because such a task would be difficult, if not impossible to attain in a brief college course.

The one Year Agricultual Course is open to young men eighteen years old or over who, since they were ten years of age, have had at least five years experience on the farm.

The One-year Agricultural Course is not a substitute for the regular four year degree course which is recomended to all who have time and means to take it.

The course will begin October 1st and end June 1st, and a certificate of proficiency will be given those who successfully finish the course and stand the final examinations.

The necessary preparation for the course is an elementary school education, including the subjects usually taught through the seventh grade.

In order to get the benefits of cheap board, short course students must live in barracks, and of neccessity be subject to military control. For the sake of economy as well as for military reasons, they will wear the College uniform and in all respects deport themselves as do other cadets.

The cost of the course is as follows:

Board, laundry, heating, and water @$10.00 pr. mo....	$80.00
Incidental fee	5.00
Medical fee	5.00
Breakage fee	3.00
Uniforms—2 coats, 2 pairs trousers and 1 cap	24.55*
Total	$117.55

This amount is payable as follows:

Oct. 1st, upon matriculation	$52.55*
November 13th,	22.50
January 22nd,	22.50
April 2nd,	20.00
Total	$117.55

Tuition students pay $40.00,—$10.00 additional per quarter. In accordance with the State law, residents of South Carolina are granted free tuition upon presentation of a certificate from the County Auditor. These certificates are issued upon affidavit made by the parents or the guardian to the effect that he or she is unable to pay tuition. The certificate blanks will be furnished by the President upon request.

Necessary books and supplies will cost about $15.00 additional for the session.

A detailed description of the various subjects taught is given in the next few pages.

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* Varies slightly each year.

Outline of the One Year Course in Agriculture
Beginning October 1st and Ending June 1st

	Hours Per Week		
Theoretical	1st term	2nd term	3rd term
Rhetoric	3	3	3
Farm Calculations and Bookkeeping	3	3	3
Horticulture	2	0	2
Agriculture	2	2	2
Animal Husbandry and Dairying	3	3	3
Botany	2	0	0
Entomology	0	2	2
Farm Science	0	2	0
	15	15	15

Practical			
Forge and Blacksmithing	2	2	2
Woodwork and Farm Designing	2	2	2
Horticulture	2	0	2
Agriculture	2	2	2
Animal Husbandry	2	2	0
Veterinary Science	0	2	0
Botany	2	0	2
Entomology	0	0	2
Farm Science	0	2	2
Drill	3	3	3
	15	15	15

Rhetoric

Three hours theoretical per week throughout the year.

A course intended to aid the student in the writing of business letters and in the proper use of the English language both written and spoken. A portion of the time will be devoted to a course in Parliamentary Practice for the purpose of equipping the student for effective leadership in public meetings, farmer's institutes, church and Sunday school work, social gatherings, and committee service. The training is intensely practical. The students issue calls for meetings, organize, and transact business under the supervision and direction of the instructor, who criticises and corrects and points out ways of facilitating the work of the meeting. Students preside in turn over the meetings and thus learn by practice the rules of Parliamentary procedure. Practice is given in writing resolutions, committee reports, motions, petitions, and in the keeping of minutes. Simple questions are discussed briefly with the view of assisting the student in gaining the power of thinking clearly and speaking forcefully while on his feet.

Woodwork

Practice in the use of hand tools, such as planes, saws, chisels, etc., a series of exercises in bench work calculated to show the construction of mortices, dove-tails and joints, followed by a demonstration of all the machines in the planing shop. Instruction will be given, illustrated by black-board diagrams, upon proper methods of the various farm constructions, such as gates and buildings, with special reference to roofs and their supporting frame work.

It will not be the aim of this course to turn out finished carpenters, but to endeavor to give each man elementary practice, and to teach him the fundamental principles of woodwork such as are used in the construction and repairs on the farm.

Forge Work

This course is designed to meet the needs of those who expect to live on the farm. It consists of a graduated system of exercises in steel and iron; embracing such principles as bending, welding, sharpening, etc., which the student will find most useful to him in the upkeep of farm machinery and tools. A limited amount of threading, riveting, brazing and soldering is also given.

Agriculture

Two hours practical and two hours theoretical per week per term throughout the year.

This course embraces lectures and laboratory studies of the more important physical properties of soils and their modification, soil fertility, fertilizers, manure, and crop rotation: class room and field work dealing with the planting, cultivating, harvesting, uses, and improvement of the most important farm crops; lecture and laboratory work dealing with the assembling of farm implements, their use and handling, cement work, rope splicing, and handy farm devices.

Animal Husbandry and Dairying

Two hours per week theoretical and two hours per week practical first and second terms. Three hours per week theoretical third term.

The course in Animal Husbandry will deal with the study of the different breeds and types of farm animals, the conditions for which they are best suited, and the most economical methods of improvement. This will be followed by a study of the most profitable methods of feeding and caring for animals, the principal laws of breeding, the marketing of farm products, and the judging and selection of animals. Special attention will be given to the feeds available in the State and the conditions with which the student will have to contend in the breeding and feeding of live stock.

In the course in Dairying the student will have practice in the use of cream separators, the manufacture of good butter, and the use of the Babcock test in testing milk and its products. This course will cover all the essentials for the successful management of the dairy farm and herd and the making and marketing of dairy products.

Horticulture

Two hours theoretical and two hours practical per week for the first and third terms.

This course is designed primarily to aid the student in becoming familiar with the practical problems of orchard, garden, and greenhouse. The work consists chiefly of the propagation of nursery plants, budding and grafting, pruning, choosing varieties, transplanting, vegetable gardening, soil varieties, location, and cultivation. The greenhouse, orchards, gardens, and campus offer splendid opportunities and furnish abundant material for practical work.

Farm Calculations and Bookkeeping

Three hours theoretical per week first, second, and third terms.

In this course emphasis will be laid upon the fundamental principles of arithmetic and especially upon such as will be useful in all farm calculations. Problems will be given to teach mixing fertilizers, calculating interest, etc.

Botany

Two hours practical and two hours theoretical per week first term. Two hours practical per week third term.

This course is intended to give a working knowledge of plants and their requirements for life and reproduction, with special reference to their improvement by cross breeding. The care and improvement of the farm woodland will be considered.

Some time will be devoted to the study of the diseases of farm crops, and methods for their control and prevention will be considered; this includes directions for the preparation and application of the more common spraying mixtures. Members of the course will be supplied with an abundance of material, both fresh and preserved, for the practical work.

Entomology

Elementary Study of Insects

Two hours theoretical per week second term.

In this course the student considers such elementary insect structure and insect habits as will enable him to understand the work that follows. This course includes the study of spraying, dusting, and fumigating apparatus. Field work is given on the winter habits of field insects together with practical work in controlling insects which destroy stored products.

Orchard and Garden Insects

Two hours theoretical per week third term.

In this course the principal orchard and garden insects are studied. Careful attention is given to the life history and control of these insects.

Two hours practical per week third term.

This course gives thorough and detailed instruction on the application of sprays for controlling insects. It includes a comparative study of the essential parts of the spray pumps and accessories. Each student is required to work out a practical problem using an orchard, garden, or shade tree grove within this State.

Veterinary Science

Two hours practical per week second term.

A short practical course taking up the simple diseases of animals and the methods of treatment.

Farm Science

Two hours theoretical and two hours practical per week second term.

This course in Elementary Farm Science is designed to teach such simple principles of physics, chemistry, geology, and meteorology as are necessary to a full understanding of the other courses offered. It will also enable the students to have a better comprehension of Experiment Station and Government Bulletins and of many common every day problems of farm life.

Special Course in Electrical Engineering

Students desiring to take a special course in electrical engineering should remember that no one can hope to become an electrical engineer who has not the necessary foundation in mechanical engineering, to which electrical engineering is a superstructure.

No special classes will be formed.

Students desiring to enter the junior class will be expected to be prepared on mechanical drawing, physics and chemistry, and on mathematics. They will be expected to take with the junior class, in addition to their electrical studies, physics, mechanics, mathematics, mechanical drawing and machine shop work. Without these additional branches the student will not be prepared for the more strictly engineering work of the senior year.

To enter the senior class, a student must be proficient in the work of the junior year, in which physics and calculus are completed.

In addition to the electrical subjects prescribed for the senior year, he must take—unless he is proficient along these lines—mechanics, mechanical engineering and laboratory, drawing, and machine design.

Students who are not prepared, or unwilling to take the other subjects necessary to the successful study of electrical engineering, will not be permitted to take a special course in this line.

Irregular Courses

Every student is required to pursue one of the regular courses as scheduled on the preceding pages, unless for special reasons this seems inadvisable or impracticable. In such cases an irregular course may be granted by the Faculty on the following conditions:

1. The course applied for must be such as to fully and profitably occupy the student's time.
2. The application must be accompanied by the written

approval of parent or guardian and of instructors in all subjects included in the course.

3. Irregular courses are not granted to students in the preparatory class.

4. Diplomas are not issued to students in irregular courses, but a certificate of proficiency will be given when the work completed is deemed worthy of it.

A student who desires to take an irregular course will be referred to a member of the Faculty, who will advise him in reference to the character of the work that is best for him to pursue. After the course has been thus arranged and approved by the Faculty, no other changes will be allowed without the endorsement of his adviser.

Preparatory Course

If a boy is not sufficiently advanced to enter the freshman class and the President concludes that said boy has not had, and can not get, sufficient school facilities at or near his home to prepare him to enter the freshman class, then he will be allowed to enter the preparatory class. In this class thorough instruction is given in the elements of English, mathematics, history, and geography.

If a boy has had or can get sufficient school facilities at or near his home, then he must stand his examination for one of the College classes, and failing to pass the required examination for the freshman class, must return home.

The instruction in this department is under the immediate supervision of the Headmaster, and is closely articulated with the work in the Academic Department.

The course of study is as follows:

Subjects	Hours per week		
	Term		
	1st	2nd	3rd
Arithmetic	4	4	4
Algebra	4	4	4
English Grammar and Composition	4	4	4
Reading and Spelling	4	4	4
Geography	2	2	2
History	2	2	2
Penmanship	1	1	1
Military Drill	3	3	3

ENGLISH GRAMMAR

Assistant Professor Sease

The course in Englsh Grammar aims to give to the student a comprehensive knowledge of the principles of the language, and acquaints him with the elementary rules and practices of composition.

Text-book: Kinard's The English Language. Book 2.

In connection with the course in English Grammar and Composition, the students of the class are also instructed in Spelling, Reading, and the Elementary English Classics.

Text-books: Gilbert's School Studies in Words. Hill's Fifth Reader; and such classics as the instructor may from time to time select: Written review work and compositions are required at stated periods throughout the session.

HISTORY

Assistant Professor Sease

The Preparatory course in History is designed to acquaint the student with the chief events in the History of the United States thereby preparing him for his work in this subject in the College classes.

Text-book: Thompson's United States History

MATHEMATICS

Instructor Wells

In order to pursue this course successfully the student should have a good working knowledge of arithmetic through fractions.

Arithmetic

Thorough instruction is given in all the essential principles and methods of arithmetic.

The class room is supplied with apparatus for teaching compound quantities and measurements.

Text-book: Colaw and Ellwood's Advanced Arithmetic.

Algebra

The work in Algebra extends through quadratics.

Text-book: Wells's Algebra for Secondary Schools—Part I.

GEOGRAPHY

Instructor Wells

Thorough instruction is given in the essential principles of geography.

Text-book: Maury's New Complete Geography.

Students who satisfactorily complete this course will be advanced to the freshman class. Those who fail to pass to the higher class may review the course next session. Upon recommendation of the instructors of the department, a student in the preparatory class may be permitted, at any time during the session, to stand examinations for admission to the freshman class.

Degrees, Medals and Honors

The degree of Bachelor of Science (B. S.) will be conferred on any student who satisfactorily completes one of the prescribed four-year courses of study, as tabulated on the preceding pages, and submits an approved thesis not later than June 1st of his senior year. The course pursued is indicated on the diploma.

Distinguished Students.—Students who make an average grade of 90 per cent. or over for any session are designated as **distinguished**; provided, however, that the minimum grade on any subject shall not be less than 80 per cent.

Trustees' Medal.—The Board of Trustees has established a gold medal, to be awarded annually to the best speaker among the representatives of the literary societies at Commencement. These representatives are chosen by judges selected by the societies at the annual public exercises in Memorial Hall. The medal is awarded by judges selected by the Faculty. Won in 1912 by J. T. Lazar, '12.

Literary Society Medal.—It is customary for the three literary societies to award gold medals annually for excellence in debate, oratory, and declamation.

The medals for excellency in debate were won by H. A. Freeman, '12, Calhoun; T. R. Reid, '12, Columbian; E. E. Hall, '12, Palmetto.

In oratory by D. B. Hill, '12, Calhoun; J. F. Ezell, '12. Columbian; T. C. Haddon, '14, Palmetto.

In declamation by E. P. Josey, '12, Calhoun; J. N. McBride, '14, Columbian; C. B. Faris, '12, Palmetto.

These awards are for the session of 1911-1912.

The Chronicle Medals.—The Chronicle, the monthly magazine published by the literary societies, also usually awards three gold medals, for the best story, the best poem, and the best essay contributed by students during the year.

A Blue Silk C. A. C. Flag is awarded in June of each year to the best drilled company, and is carried by it during the succeeding year.

R. W. Simpson Medal.—A gold medal thus designated is awarded annually to the best drilled cadet in the freshman, sophomore or junior classes. This medal was won in 1912 by Cadet F. J. Jervey, '14.

Norris Medal.—The following is from Col. Norris' will and covers the conditions upon which the medal is awarded:

"I give $500, face value, Norris Cotton Mill stock, to the Trustees of Clemson Agricultural College of South Carolina, on condition, the dividend thereon shall be applied annually to the purchase of a gold medal, to be known as the 'Norris Medal,' to be awarded to the student of Clemson College meriting the same at graduation, under such rules and conditions as may be prescribed by the said Board of Trustees, and which medal shall have engraved on it **'Honos habet onus'** (Honors bring responsibilities)."

The medal was awarded in 1912 to A. K. Goldfinch, '12.

Appointments in the Army—The following are extracts from General Order 231, War Department, 1909:—

6. The institutions, not to exceed ten in any year, whose students have exhibited the greatest application and proficiency in military training and knowledge will be designated, in addition to the above classification, as "Distinguished Institutions", and the year or years in which distinguished will be added.

32. The President of the United States authorizes the announcement that an appointment as second lieutenant in the Regular Army will be awarded annually to an honor graduate of each of the institutions designated as "Distinguished Institutions" for that year, under the provisions of paragraph

6 of this order, provided that sufficient vacancies exist after the appointment of graduates of the Military Academy at West Point and the successful competitors in the annual examination of enlisted men. By the term honor graduate is understood a graduate whose attainments in scholarship have been so marked as to receive the approbation of the president of the school or college, and whose proficiency in military training and knowledge and intelligent attention to duty have merited the approbation of the professor of military science and tactics.

The student recommended must be a member of the graduating class of the year in which the appointment is made, must be a citizen of the United States, unmarried, not less than twenty-one nor more than twenty-seven years of age, of exemplary habits, and of good moral character.

For appointment to the cavalry, field artillery, and infantry such students will not be required to undergo any mental examination. For appointment to the Coast Artillery Corps, they will be exempt from preliminary mental examination, but not from the examination in the advanced or technical subjects required by existing orders of candidates for appointment from civil life to the grade of second lieutenant in that corps.

Honor graduates of distinguished institutions will be appointed in advance of other appointees from civil life and their places in the lineal and relative list of second lieutenants of the army will be determined at the War Department by lot.

34. Upon the graduation of every class, the professor of military science and tactics, after consultation with the president of the college or school, will decide upon and report to the Adjutant General of the Army the names of such students belonging to the class as have shown special aptitude for military service, and will furnish a copy of his report to the adjutant general of the State for his information.

35. All graduates should be encouraged to take the examination for commission in any volunteer force which may

hereafter be called for and organized under the authority of Congress, prescribed in General Order, No. 57, War Department, March 25, 1909, under the provisions of section 23 of the act approved January 21, 1903. Graduates whose names have been reported to the Adjutant General of the army under the provisions of paragraph 34 of this order will be excused, if they so desire, from the examinations in those subjects which are actually covered by the course of instruction, regular or special, and in which they are declared proficient by the professor of military science and tactics, with the concurrence of the college inspection board convened annually by the War Department. Their marks in said subjects will be rated at 75 per centum of the maximum.

DETAILED DESCRIPTION OF COURSES

1. Agricultural Department

Agronomy (100-109)
Geology and Mineralogy (110-117)
Horticulture (120-129)
Veterinary Science (130-136)
Zoology and Entomology (140-149)
Dairying and Animal Husbandry (150-169)
Botany and Forestry (170-187)

2. Engineering Department

Electrical Engineering (200-204)
Mechanical Engineering (210-216)
Civil Engineering (230-238)
Drawing and Designing (240-249)
Forge and Foundry Work (250-252)
Machine Work (260-261)
Wood Work (270-272)
Architectural Engineering (282-290)

3. Chemical Department

Chemistry (300-312)

4. Textile Department

Carding and Spinning (400-406)
Weaving and Designing (410-414)
Textile Chemistry and Dyeing (420-423)

5. Academic Department

English (500-504)
History and Political Economy (510-515)
Mathematics (520-527)
Physics (530-533)
Bookkeeping (540)
German (550-551)

6. Military Science

Military Science and Tactics (600-602)

AGRICULTURAL DEPARTMENT

Professor J. N. Harper, Director

AGRONOMY

Professor Hutchinson

Assistant Professor Wilson
Assistant Gardiner

100. Elements of Agriculture

Freshman Class; First, Second and Third Terms
All courses

This course is outlined to serve not only as an introduction to the regular courses in agriculture, but, also, to give a comprehensive view of the subject to (1) students who will not be at the College longer than one year, (2) students in the engineering and Textile Departments. The object is to familiarize these students with the simpler principles of plant growth, soils, fertilizers, farm crops, animal production, injurious insects, plant diseases, and farm management.

101. Farm Mechanics

Sophomore Class; Third Term
Course I

A detailed study of farm implements. The object of the course is to familiarize the student with farm machinery and the saving of labor affected by its use. Two hours in class room and two hours in laboratory.

102. Soils

Junior Class; First and Second Terms
Course I

This is a course in soil technology. The soil as a medium for root development and a reservoir for water is first studied; the student then takes up a study of the plant food in the soil, manures, fertilizers, soil organisms, soil air and the external factors in soil management. A laboratory course in soil physics is also given. Two hours in class room and two hours in laboratory.

103. Farm Crops

Junior Class; Third Term
Course I

A study of cotton, grain, and root crops, their composition, value, uses, cultivation and improvement. A course in corn judging is given in the laboratory.

104. Plant Breeding

Senior Class; First Term (Elective)

Course I. Two hours theoretical

A course dealing with the improvement of such field crops as cotton, corn, wheat, oats and the important forage crops. Variation, selection and hybridization are studied.

105. Farm Crops

Senior Class; First and Second Terms (Elective)

Course I. Two hours theoretical, two hours practical

A course in the production and handling of the princcipal forage crops, grains, and miscellaneous ccrops. Also a course in seed testing.

106. Farm Machinery

Senior Class; First Term (Elective)

Course I. One hour theoretical, four hours practical

An advanced course in the manipulation of farm machinery and farm motors. One hour in class room and four hours in laboratory.

107. Concrete Construction and Drainage

Senior Class; Second Term (Elective)

Course I. One hour theoretical, four hours practical

The object of this course is to acquaint the student with the operations of mixing and placing concrete and to give him a working knowledge of cement. Land drainage is studied. The student is acquainted with the construction of terraces, open ditches, and the laying of tile. One hour in class room and four hours in field and laboratory. Offered as major and minor subject.

108. Farm Management

Senior Class; Second and Third Terms (Elective)

Course I. Two hours theoretical second term, three hours theoretical and six hours practical third term

This course is intended to teach the principles of successful agriculture and how to successfully operate an individual farm. Such topics as land, labor, capital, farm buildings, and machinery, choice of a farm, types of farming, marketing farm produce, and cooperation are considered.

109. Soil Fertility

Senior Class; Third Term (Elective)
Course I. Two hours theoretical

A course dealing with systems of permanent agriculture. The composition of soils and crops, manures, fertilizers, crop rotations, and results of field tests at the Experiment Stations are studied. Two hours in the class room.

GEOLOGY AND MINERALOGY

Prof. Calhoun

110. Elementary Mineralogy

Junior Class; Course VI

This course consists of laboratory study of the common economic and rock-making minerals, the common rocks, and the various natural structural materials. The physical properties of minerals are studied and practice is given in the determination of unknown specimens of both minerals and rocks.

111. Mineralogy

Junior Class; Course II and as a minor for those who elect their major in Chemistry

A comprehensive course in crystallography, physical and chemical mineralogy, and systematic descriptive and determinative mineralogy. Crystallography is taught by lectures and text-book, with laboratory work based on the collections of models and natural crystals; also physical, optical, and chemical properties of minerals, and descriptive mineralogy, covering the more important mineral species. Much of the laboratory work is devoted to the determination of minerals by means of their physical and chemical properties, by comparison with labeled specimens of the systematic collection, and by the use of unlabeled collections for practice in identifying minerals at sight. This course gives a sufficient knowledge of mineralogy for the geologist, metallurgist, mining engineer, or chemist, and will enable the student to identify readily all but the rarer minerals.

112. Agricultural Geology

Senior Class; Course I

In this course geology is considered in its practical relation to agriculture. The student becomes familiar with the soil-making rocks and minerals, the influence of the various mineral constituents in rocks on the texture of soil, the natural mineral fertilizers, and the formation of soils from rocks. The question of the relation of underground water to wells, springs and artesian wells, to drainage problems and to soil water is studied. The classes of soils derived from rivers, wind action and glacier deposits are taken up. The principles and methods of making soil maps are explained. Topographic and geological maps are studied chiefly with reference to agricultural problems.

113. Engineering Geology

Junior Class; Courses III, IV, VI

The course in Engineering Geology lays special emphasis on the recognition of common economic rocks and minerals together with their use and adaptability for engineering purposes. Structural geology is studied with especial reference to that portion which deals with problems of excavation and quarrying. Geological and topographic maps are examined with the needs of the engineer in mind.

114. Chemical Geology

Senior Class; Course II

In this course structural geology, the theory of ore deposits, and the economic side of geology are emphasized. Special stress is laid upon the action of underground water in forming ores and veins. The theories of the formation of various classes of rocks are considered and special attention is given to that side of historical geology which enables the chemist to recognize certain horizons which carry minerals and ores of economic importance.

117. Physiography

Sophomore Class; Course I

A laboratory course designed to give the student an adequate conception of the use of the meteorological instruments, weather maps, and the general elementary principles of meteorology and climatology.

HORTICULTURE

Professor Newman
Associate Professor Clark
Assistant Niven

Instruction is given in the freshman, junior, and senior classes. The theoretical work is illustrated by practical exercises in the garden, orchard, vineyard, greenhouse, and ornamental grounds of the College. The practical exercises enable the student to become familiar with all details of the work.

121. Practical Pomology

Junior Class; First Term

Course I

A study of general and fundamental principles of fruit growing. The subjects included in this course are: selection of site, laying out of orchards, preparation of soils, selection of varieties, method of culture, fertilizing, pruning, spraying, thinning, harvesting and packing. Practical problems in growing and handling commercial orchards make this course decidedly valuable.

Text Book: Green's Popular Fruit Growing.

122. Olericulture—Vegetable Gardening

Junior Class; Third Term

Course I

The work in this course covers all phases of garden work, but special emphasis is given to the home garden. The subjects considered are the following: construction, care, management, and uses of hotbeds and cold frames, laying out gardens, preparation of soil, fertilizing, seed sowing, transplanting, cultivation, and treatment for diseases and insects.

Text-book: Newman's Southern Gardener's Practical Manual.

123. Systematic Pomology

Senior Class; First Term (Elective)

Course I

The description, nomenclature, and classification of our common and subtropical fruits and nuts are carefully studied. In addition the student is given an opportunity for practice in fruit judging and displaying. A collection of fruits from various parts of South Carolina and other states will furnish ample material for studying types.

Text-book: F. A. Vaugh's Systematic Pomology.

124. Commercial Pomology

Senior Class; First, Second and Third Terms (Elective)

Course I. Two hours theoretical first term and two hours practical each term

The course deals with the problems of marketing fruit, transportation, storage and storage house construction, methods of packing, packing houses, formation of fruit growers' Associations, etc. The handling of by-products will be made a strong feature in this course.

Text-book: F. A. Vaugh's Commercial Pomology.

125. Nut Culture

Senior Class; First Term (Elective)

Course I. Two hours theoretical and two hours practical

Nut growing is becoming quite an important branch of Horticulture. This course is given to meet the demands for a better knowledge of this important industry. This course deals with the selection of varieties, location of orchards, planting, cultivating, fertilizing, and harvesting, curing and marketing. The theoretical work will be supplemented by laboratory and field practices.

126. Small Fruits

Senior Class; Second and Third Terms (Elective)

Course I. One hour theoretical each term

In this course is taken up the problems of growing small fruits, such as strawberries, blackberries, dewberries, etc. The selection of varieties, planting, cultivating, harvesting, packing and marketing will be studied.

127. Plant Propagation

Senior Class; Second Term (Elective)

Course I. Two hours theoretical, two hours practical

In this course instruction is given both by lectures and text-beok. The subjects considered are seed sowing, seed testing, propagation by cuttings, layers, budding, grafting, garden making, and early care of bush and tree fruits.

Text-book: Bailey's Nursery Book.

128. Principles of Vegetable Growing

Senior Class; First, Second, and Third Terms (Elective)

Course I. One hour theoretical first term and two hours theoretical second and third term. Two hours practical each term.

This course goes deeper into the problems of vegetable culture than course No. 122. It deals with the history and the botanical relationship of vegetables, locations and soils suitable for gardening, crop rotations and successions, irrigation, application of fertilizers, etc., hot bed and greenhouse construction and management, and harvesting, grading, packing and marketing vegetables. Theoretical and practical.

Text-book: Watt's Vegetable Gardening.

129. Landscape Gardening

Senior Class; Third Term (Elective)

Course I. Two hours theoretical, two hours practical

The subjects considered in this course are propagation and care of flowering plants, bedding plants, shrubs, and laying out and planning home grounds, school grounds, parks, etc.

VETERINARY SCIENCE

Professor Powers

Assistants, Feeley, Quigley, and Simonsen

130. Veterinary Anatomy and Physiology

Junior Class; Course I

This course consists of a series of lectures on anatomy followed by the study of physiology.

The course in anatomy, which is arranged as an introduction to the study of physiology and stock judging, includes the study of skeleton, and principal articulations, muscles of locomotion, and the organs of the circulatory, respiratory, digestive, generative, and urinary apparatus. Skeletons, models, charts, and dissected specimens are used in this course.

The course in physiology treats of the functions of the various organs of the bodies of domestic animals.

Text-book: F. Smith's "Veterinary Physiology."

131. Physiological Laboratory

Junior Class

During the second term four hours each week are devoted to a laboratory course in physiology.

Text-book: A. Fish's "Exercises in Physiology."

132. Diseases of Animals

Senior Class; First, Second, and Third Terms (Elective)

Course I. Two hours theoretical

This course consists of a series of lectures on contagious and non-contagious diseases of animals. The first half of the term is devoted to the study of the non-contagious diseases, special attention being given to cause and prevention. The free clinic (133) given each week gives opportunity for students to study many of these diseased conditions.

133. Veterinary Clinics

Senior Class; First, Second, and Third Terms (Elective)

Course I. Three hours practical

A free clinic is held at the veterinary hospital every Monday afternoon of the session. These clinics are liberally patronized by the stockmen of the surrounding country, and the material thus secured affords practical work in the surgery and the treatment of diseases. Many patients are kept in the hospital for treatment.

134. Veterinary Anatomy

Senior Class; First, Second, and Third Terms (Elective)

Course I. Two hours theoretical and three hours practical

This course is supplementary to the work given in the junior year and is intended for students who desire to attend veterinary colleges after graduation, and for those interested in the study of anatomy.

135. Histology

Senior Class; First, Second, and Third Terms (Elective)

Course I. Three hours practical

In this course students are required to secure tissues from animals and to cut, stain, and mount preparations. The study of the simple tissues is followed by the study of all the important organs of the animal body.

ZOOLOGY AND ENTOMOLOGY

Professor Conradi

Assistant Professor Somes

The work of instruction in this division consists of lectures, recitations, laboratory and field work. The work of the first two terms consists of general zoology, and is intended to be a foundation course upon which the following work in applied zoology is based.

Owing to the varied activities of this Division, including the Station laboratory and field work, the State Entomological work, and the systematic work of the museum, the student has ample opportunity to become familiar with the methods with which these various activities are operated. It enables the student to obtain an insight into the practical field, orchard, garden and forest entomology. Ample opportunity is offered the student to familiarize himself with organization methods.

140. General Zoology

Sophomore Class; Course I. First Term

This course consists of a study of the fundamental principles of life, including structure, habits and life history of the invertebrate animals. Special emphasis is given the economic aspect, lectures and laboratory dissections of type forms.

141. Vertebrate Zoology

Sophomore Class; Course I. Second Term

A continuation of the work of the preceding term. In this the student becomes familiar with the general anatomy, physiology and ecology of typical vertebrate types, together with a general knowledge of the laws of development.

142. General Entomology

Sophomore Class; Course I. Third Term

An introduction to Entomology. This course embraces the elementary principles of Entomology including theoretical and laboratory work on the structure and relationship of insects.

143. Economic Entomology

Junior Class; Course I.

A practical study of field crop insects and the methods of controlling them. This is mainly a field course and considers principally the effect of fall plowing, cleaning of terraces and cleansing and cover crops. The student is shown why these various operations are recommended.

143a. Forest Entomology

Senior Class; First Term (Elective)

Course I. Two hours theory; two hours practice

A consideration of the insects attacking forest and shade trees. In this course the life histories, habits and methods of work are studied, together with the parasites and the control methods employed.

144. Insects Affecting Stored Products

Senior Class; First Term (Elective)

Course I. Two hours theory; two hours practice

A consideration of the life history, habits and parasites of the insects affecting stored products. In this course the methods of storing are carefully studied and practical demonstrations are given in the fumigation of cribs.

145. Insect Anatomy and Histology

Senior Class; First and Second Terms (Elective)

Course I. Two hours practice

(Open only to students taking their major in entomology).

This course consists of the dissecting of specimens together with methods of staining in section.

146a. Disease Carrying Insects

Senior Class; Second Term (Elective)

Course I. One hour theory; two hours practice

A consideration of the insects known to carry diseases as well as those that are suspected. It consists of lectures and laboratory periods on the life history, habits and natural enemies, together with demonstrations for practical control.

146b. The Animal Parasites

Senior Class; Second Term (Elective)

Course I. Two hours practice

This course consists of laboratory practice on the external and internal animal parasites including the lice, mites and nematodes. The student is given practical work in the field and stables in order to thoroughly familiarize himself with the methods for controlling them.

147a. Current Literature

Senior Class (Elective)

Cousrse I. One hour per week

(Open only to students taking their major in entomology.)

147b. Current Literature

Senior Class (Elective)

Course I. One hour per week

(A required course open only to students taking their major in Entomology).

This course consists of current review of entomological literature, consisting of the magazines, journals and Station bulletins, and the United States Government publications.

148a. Fumigation Methods

Senior Class; Second Term (Elective)

Course I. One hour theory

This course deals especially with the fumigation methods employed in the nursery, greenhouse and in the orchards. The laboratory is equipped with apparatus for practical demonstration.

148b. Quarantine Methods

Senior Class; Second Term (Elective)

Course I. One hour theory

A consideration of the various laws now in force in the several

States together with the methods employed for preventing the dissemination of injurious insects.

149a. Field Crop Insects

Senior Class; Third Term (Elective)

Course I. Two hours practice

This is a practical course considering the insects attacking field crops outdoors. The work consists mainly of investigations in the field upon the work of certain insects assigned to the students. Careful consideration is given to culture and farm management as applied to the control of field insects.

149b. Truck Crop Insects

Senior Class; Third Term (Elective)

Course I. Two hours theory; two hours practice

This course consists of two lecture and two practical periods per week, considering the various insects affecting vegetable crops. The lectures are supplemented by laboratory periods as well as field practice upon typical insects assigned to the students. The work is supplemented by demonstrations in the field of control methods, especially the application of insecticides and the manipulation of spray machinery.

149c. Orchard Insects

Senior Class; Third Term (Elective)

Course I. Two hours theory; two hours practice

A thorough consideration of the insects affecting the apple, pear and stone fruits. The student is given thorough practice in the laboratory in reference to the structure of spraying apparatus and each student is required to carry out a complete program in the orchard for the control of the various insects destroying the tree and the fruit.

ANIMAL HUSBANDRY AND DAIRYING

Professor Shields

Associate Professor Burgess
Assistant Haden

150. Breeds and Types of Horses, Mules, and Beef Cattle

Junior Class; Course I

A study of the origin, characteristics, and description of the several breeds and market classes of horses, mules, and beef cattle; selection and management of breeding stock; methods of improvement, and conditions for which the different types are best suited.

152. Breeds and Types of Dairy Cattle, Sheep and Swine

Junior Class; Course I

A study of the characteristics and description of the several breeds of sheep and swine; selection and care of breeding animals; a discussion of pastures, grazing crops, and feeds best suited for them.

153. Principles of Breeding

Senior Class; First Term (Elective)

Course I. Two hours theoretical, two hours practical

A study of the general principles of breeding and their application to the breeding of farm animals. Practical work devoted to a study of pedigree construction and problems in heredity.

154. Animal Breeding

Senior Class; Second Term (Elective)

Course I. Two hours theoretical, two hours practical

This course is a continuation of course 153.

155. Stock Farm Management

Senior Class; Third Term (Elective)

Course I. Two hours theoretical, two hours practical

A consideration of various systems of live stock management in its relation to soil fertility.

156. Feeding Animals

Senior Class; First Term (Elective)

Course I. Two hours theoretical, two hours practical

A consideration of the laws of nutrition, the character and composition of feed stuffs, and the general principles of feeding. Practical work given in computing rations and in judging live stock.

157. Feeding Animals

Senior Class; Second Term (Elective)

Course I. Two hours theoretical, two hours practical

This course is a continuation of course 156 in both theoretical and practical work.

158. Beef Production

Senior Class; First Term (Elective)

Course I. One hour theoretical, two hours practical

Course to include a discussion of the production, systems of management, handling and feeding of beef animals. Text supplemented by discussion and analysis of literature on subject from Station bulletins.

159. Pork Production

Senior Class; Second Term (Elective)

Course I. Two hours theoretical, two hours practical

Course to include a discussion of the various systems of management, breeding and feeding of hogs for the production of pork. Either lecture or text, to be supplemented by discussion and analysis of Station publications dealing with various experiments on the subject.

160. Horse and Mule Production

Senior Class; Third Term (Elective)

Course I. Two hours theoretical, two hours practical

Course to include a discussion of the various systems of producing, care and management and feeding of horses and mules. Lecture supplemented by discussion and careful analysis of available literature on the subject.

161. Milk and its Products

Junior Class; Course I

It is the object of this course to give the student thorough knowledge of the sanitary conditions necessary to produce and handle milk; pasteurization; milk testing; dairy machinery: manufacture of butter, cheese and ice cream, and marketing.

162. Practical Work in Creamery

Junior Class; Course I

Cream separation and ripening; pasteurization of milk and cream; bottling milk; butter and cheese making; milk testing; butter and cheese scoring.

163. Milk Hygiene

Senior Class; First Term (Elective)
Course I. Two hours theoretical

Relation of milk to disease. A study of city milk laws. Lectures and text book.

164. Herd Record Work and Dairy Farm Management

Senior Class; Second Term (Elective)
Course I. Two hours theoretical

A study of many herds in the State will be made by the records of the herds. Dairy farming and its relation to soil fertility. Selection of breeding stock. Raising of calves. Given by lectures and by use of bulletins.

165. Barn, Silo and Dairy Construction

Senior Class; Third Term (Elective)
Course I. Two hours theoretical, two hours practical

A study of the best equipment for the dairy farm will be made. Methods and cost of construction will be discussed. Crops for silage. Lectures and bulletins.

166. Advanced Testing and Butter Judging

Senior Class; First Term (Elective)
Course I. Two hours practical

Butter, cheese, and other milk products will be tested and judged. Determination of preservatives of milk will be made.

167. Herd Record Work

Senior Class; Second Term (Elective)
Course I. Two hours practical

A study of the herds of the State. Cost of production by the individual cow will be stressed. Cost of feeding and value of products will be compared.

169. Advanced Live Stock Judging

Senior Class; Third Term (Elective)
Course I. Two hours theoretical, two hours practical

Special emphasis is given to a study of type and breed conformation. This course is offered only to those students who have taken the preceding courses in which live stock judging is considered.

BOTANY AND FORESTRY

Professor Barre
Associate Professor ————
Instructor Massey

171. Elementary Phanerogamic Botany

Freshman Class; Courses I, II

A preliminary practical course in Phanerogamic Botany consisting of the morphological study of Angiosperms from seed through the entire growth of the plant to production of seed. The students have access to a very full line of fresh and preserved botanical material when the course demands its use.

172. Elementary Cryptogamic Botany

Freshman Class; Course I

A course in the study of Algae, Fungi, Bryophytes, Pteridophytes and Gymnosperms. The work is almost entirely microscopical. The students will secure some material from the field for study, although much will be furnished in the laboratory and class room.

173. Systematic Botany

Freshman Class; Course I

A course in the taxonomic and ecological features of this region with a laboratory and field study of the main types of Angiosperms. From 50 to 100 plants are here identified and classified.

Text-book: Gray's New Manual of Botany, or Gray's Field, Forest and Garden Botany.

174. Elements of Forestry

Junior Class; Course I

A lecture, field, and laboratory course dealing with the general principles of forestry, together with the practical methods applied in lumbering, forest propagation and conservation.

Text-book: Green's Principles of American Forestry.

175. Plant Physiology

Sophomore Class; Course I

A study of the structure and functions of plants, the object being to teach the student how plants live and grow and why they are dependent on certain physical factors as light, water, air, etc.

Text-book: Duggar's Plant Physiology.

176. Plant Pathology

Sophomore Class; Course I

A systematic study of fungi with special reference to species causing diseases of economic plants. The students are taught to recognize the more common diseases, particularly in the early stages; and the whole question of prevention and practicable remedies is fully discussed. Methods of isolating, artificially cultivating, and inoculating with disease causing organisms will be considered.

Text-book: Stevens and Hall's Diseases of Economic Plants.

177. General Bacteriology

Senior Class; Course I
Sophomore Class; Course II

A brief study of the general character, habits and work of bacteria is followed by practical work in growing, mounting and determining them. Soil and dairy bacteria are given special attention. The principal bacterial contagious diseases and methods of prevention are considered briefly in the class work.

Text-book: Frost and Campbell's General Bacteriology.

178. Animal Bacteriology

Senior Class; Second Term (Elective)
Course I. Two hours theoretical, four hours practical

This course treats of pathogenic bacteria and dairy bacteriology more in detail. The principal contagious bacterial diseases of animals are studied.

179. Soil Bacteriology

Senior Class; Third Term (Elective)
Course I. Two hours theoretical, four hours practical

This course is designed to meet the needs of those students who wish to specialize in bacteriology or in soils and soil fertility.

180. Diseases of Field Crops

Senior Class; First Term (Elective)
Course I. Two hours theoretical, two hours practical

A detail study of the common and destructive diseases of cotton, corn, and other field crops.

181. Diseases of Truck Crops and Ornamental Plants

Senior Class; Second Term (Elective)
Course I. Two hours theoretical, two hours practical

A detail study of the diseases of garden and truck crops and ornamental plants. Designed for those students who specialize in horticulture.

182. Advanced Plant Pathology

Senior Class; Third Term (Elective)
Course I. Two hours theoretical, two hours practical

A study of special diseases and of methods of investigation in vogue in plant pathology.

183. Plant Physiology

Senior Class; Second Term (Elective)
Course I. Two hours theoretical, two hours practical

A greenhouse and laboratory course in the study of plant behaviour under controlled conditions.

184. Ecology

Senior Class; First and Third Terms (Elective)
Course I. Two hours theoretical, two hours practical

A study of the relation of the plant to its habitat.

185. Taxonomy

Senior Class; First, Second, and Third Terms (Elective)
Course I. Three hours theoretical, four hours practical, or
One hour theoretical, two hours practical

A systematic study of the seed plants of this region.

186. Mycology

Senior Class; First, Second, and Third Terms (Elective)
Course I. Three hours theoretical, four hours practical, or
One hour theoretical, two hours practical

A systematic study of fungi. This course is given for those students who wish to specialize in plant pathology.

187. Forestry

Senior Class; First, Second, and Third Terms (Elective)
Course I. Three hours theoretical, four hours practical

A study of the fundamental principles of forestry together with a detail study of the forests of this region. This course is designed to meet the needs of students who wish to specialize in forestry.

ENGINEERING DEPARTMENT

S. B. Earle, Director

ELECTRICAL ENGINEERING

Professor Dargan

Assistant Professor Wagner*

Assistant Professor Rhodes**

200. Electricity and Magnetism

Junior Class; Course III.

Principles of Electricity and Magnetism, instruments, measurements, wiring calculations, direct current dynamos, etc.

Text-books: Timbie's Elements of Electricity, Standard Hand Book for Electrical Engineers, Riggs' and Dargan's Mimeographed Notes and Problems.

201. Electrical Laboratory

Junior Class; Course III.

Experimental verification of the fundamental laws of Electricity and Magnetism, including the measurement of current, resistance, electromotive force, capacity, permeability, the tests and calibration of instruments, operation of direct current motors and generators, etc.

Text-book: Riggs, Kyser and Dargan's "Electrical Laboratory Experiments."

A number of the best books on laboratory practice are available for reference.

The student is required to study the theory as well as the manipulation of the experiments, and to express his complete study of each experiment in a carefully prepared written report.

202. Dynamo Electric Machinery

Senior Class; Course III.

First Term: Study and design of direct current dynamo-electric machinery. Second and third terms: Study of alternating currents and their application to light and power Special attention is directed to polyphase systems and apparatus.

Text-books: Franklin and Esty's Elements of Electrical Engineering; Standard Hand Book for Electrical Engineers; Riggs' Dynamo Design.

Note:—A complete dynamo design, with full set of drawings, is required as part of Course 202 in Electrical Engineering, and Course 248 in Mechanical Drawing.

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*Resigned to take effect Feb. 1, 1913. **In place of Prof. Wagner.

203. Electrical Laboratory

Senior Class; Course III.

Care, management and testing of arc lighting generators, direct current generators, direct current motors and single and polyphase machinery and apparatus.

Text-book: Riggs' Electrical Engineering Experiments.

For description of buildings and equipment, see page elsewhere.

204. Electric Lighting

Junior Class; Course IV.

Brief resume of fundamental principles in Electrical Engineering. Units, instruments, generation, and transmission of electrical power, etc. Wiring methods, distribution systems, wiring calculation, lighting, heating, and power circuits, gas lighting, call bells, etc. Theory and practice of illumination, shades and reflectors, electric lamps.

MECHANICAL ENGINEERING

Professor Earle

Assistant Professor Wagner*
Assistant Professor Rhodes**

210. Mechanism

Junior Class; Courses III, IV, V.

Spur, bevel, and screw gearing, belt gearing; lobed and elliptic wheels; epicylic trains; escapements; ratchet motions; link motions; quick return motions; cam motions.

Text-book: Keown's Mechanism.

211. Mechanics

Junior Class; Courses III, IV, V, VI.

Motion, force, velocity, force system, moments of force, general principles and methods of solving problems both analytically and graphically.

Text-book: Maurer's Technical Mechanics.

212. Mechanics

Senior Class; Courses III, IV, VI.

Two hours per week during the first two terms are given to the study of pure mechanics, center of gravity, moments of inertia, work, energy, power, elasticity, resilience, strength of engineering materials, and hydraulics.

Text-book: Strength of Materials by Boyd.

Note:—Two hours practicacl Electrical Engineering is given to Civil services in place of second term Mechanics.

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*Resigned to take effect Feb. 1, 1913. **In place of Prof. Wagner.

213. Mechanical Engineering

Senior Class; Courses III, IV, V.

Study of the design and construction of steam boilers, heaters, pumps and injectors; theory of simple, compound and triple expansion steam engines; gas and gasoline engines; hot air engines; air compressors and motors; ice and refrigerating machinery; transmission of power; specifications and the law of contracts. Theory of the strength of engineering materials. Graphical and analytical solution of problems.

Text-books: Ripper's The Steam Engine; Elements of Mechanical Designing by Kimball and Barr; Steam Turbines by Roe.

214. Mechanical Laboratory

Senior Class; Courses III, IV.

Study, use and calibration of water-meters, weirs, steam gauges, indicators, dynamometers, calorimeters; tests of fuel and lubricants; tests of building materials, as iron, wood, brick, cement, etc.; setting the valves of the plain slide-vale and automatic cut-off steam engines; indicator practice; horsepower and efficiency of steam, gasoline and hot-air engines, steam turbines, and air-compressors and motors; efficiency trials of steam boilers, superheaters; duty trial of steam pump and of College pumping engines.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice.

215. Mechanical Laboratory

Senior Class; Course V.

Study, use and calibration of steam gauges; indicators; calorimeters; tests of building material, as iron, wood, brick, cement; setting the valves of plain and slide-valve and automatic cut-off engines. Practice in running and testing water motors; steam engines; steam turbines; gasoline engines; pumps; firing and testing steam boilers.

Reference Books: Carpenter's Experimental Engineering; Smart's Engineering Laboratory Practice.

216. Testing Laboratory

Senior Class; Course VI.

Testing strength of materials in tension, compression, transverse. The above includes cast and wrought iron, wood, cement, reinforced concrete, stone, etc. So far as possible, the standard methods of making these tests are followed.

CIVIL ENGINEERING

Professor Houston

Assistant Professor Sweeny

230. Descriptive Geometry

Sophomore Class; Courses III, IV, V.

Study of the representation of points, lines, planes, surfaces and solids, and of their relations; tangencies, intersections and developments; numerous original exercises.

Text-book: Low's Practical Solid or Descriptive Geometry. Part I.

231-231a. Descriptive Geometry

Sophomore Class; Course VI.

Theory and practice are combined. Problems relating to points, lines, planes; to tangents and normals, to cylindrical, conical, and warped surfaces; to sections, intersections, and developments; to shades, shadows, and perspective.

Text-book: Low's Practical Solid Geometry, Parts I and II.

232. Plane Surveying

Sophomore Class; Course I.

This course includes the general principles and fundamental operations of surveying, with compass, level and transit

Text-book: Breed and Hosmer's Principles and Practice of Surveying, Vol. I.

232a. Plane Surveying

Sophomore Class; Course I.

Field practice is given in actual surveys of tracts of land, the area computed and plats drawn. Practice is given in laying out and dividing up land, and in locating irregular boundaries; differential and profile leveling; and the running of contours.

233. Plane Surveying.

Sophomore Class; Courses III, IV, V.

This course includes the general principles and fundamental operations of surveying, with compass, level and transit.

Text-book: Breed and Hosmer's Principles and Practice of Surveying, Vol. I.

233a. Plane Surveying.

Sophomore Class; Courses III, IV, V.

Field practice is given in actual surveys of tracts of land, the area computed and plats drawn. Practice is given in laying out and dividing up land, and in locating irregular boundaries; differential and profile leveling; and the running of contours.

234. Plane Surveying

Junior Class; Course VI.

This course includes the general principles and fundamental operation of surveying, special attention being drawn to the subjects bearing directly on the work of the architecct.

Text-book: Breed and Hosmer's Principles and Practice of Surveying, Vol. I.

234a. Practical Surveying

Junior Class; Course VI.

Field practice is given, with the compass, transit, and level. Contour maps made; volumes of earth computed; building sites staked out; batter board set; elevations given, etc.

235. Higher Surveying

Junior Class; Course IV.

In the first term, the fundamentals are reviewed; the theory of the stadia, plane table, solar transit, and other instruments taken up. City, hydraulic, and photographic surveying.

Text-book: Breed and Hosmer's Principles and Practice of Surveying, Vol. I.

In the second and third terms, Railway Engineering is studied.

Text-book: Webb's Railway Construction.

235a. Higher Surveying

Junior Class; Course IV.

Practical exercises are given with the transit, plane table, planimeter, sextant and other instruments, and the student is taught to adjust the same.

In the Railway Engineering, practice is given in laying out simple and compound curves; curves approached by a spiral; setting of slope stakes, with the computation of volume of earth. Actual location from a paper location on contour map, etc.

236. General Civil Engineering

Senior Class; Course IV.

This course includes a study of building material, mechanics of construction, derivation of practical formulas, masonry construction, foundations on land and in water, stability of walls and arches; analytical investigation of stresses in various forms of roof trusses and bridges, the field and office work in railroad construction; location and construction of country roads and city pavements; hydrostatics, motion of water in pipes and channels, determinations of discharge of streams by current meter and weirs, water power developments, water supply and the disposal of sewerage. In addition, the student is required to hand in a thesis on some engineering work. This necessitates additional field work, and outside study. The College Library furnishes valuable books of reference.

Text-books: Fieberger's Civil Engineering; Merriman and Jacoby's Roofs and Bridges, Vol. 1.

236a. General Civil Engineering (Practical)

Senior Class; Course IV.

Practical problems, bearing on the theoretical work are given; with additional work in careful mapping, river gaugeing, railway computations, etc.

DRAWING AND DESIGNING

(Includes Architectural Engineering)

Professor Lee
Assistant Professor Klugh
Instructor Birch
Instructor Harris

Throughout the course the best methods of work pursued in the drafting rooms of workshops and manufacturing establishments are given.

240. Freehand Drawing

Freshman Class; All Courses

Graded exercises in sketching from geometrical models, plaster casts, machine parts and other objects in pencil and ink, particular attention being paid to outlines and perspective.

Text-book: Pen Art Portfolio, Zaner.

241. Mechanical Drawing

Freshman Class; Courses III, IV, V, VI.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; conventional section and shade lines; working drawings of simple parts of machines from sketches and models; tracing and blue printing.

Text-book: Engineering Drawing, French.

242. **Mechanical Drawing**

Freshman Class; Courses I, II.

Exercises in the use of drawing instruments; lettering; geometrical problems; projections; plans and elevations of farm buildings, tracing and blue printing.

Text-book: Mechanical Drawing, Anthony.

243. **Mechanical Drawing**

Sophomore Class; Courses II, III, V.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; working drawings of machines or parts of machines from sketches and specifications. Elementary principles of machine design; construction of screw threads; proportioning of bolts and nuts; tracing and blue printing.

Text-book: Engineering Drawing, French.

244. **Mechanical Drawing**

Sophomore Class; Course IV.

Orthographic projection; intersection and development of surfaces; isometric drawing; perspective; shades and shadows; working drawings of machines; topographical drawing; tracing and blue printing.

Text-book: Mechanical Drawing, French.

246. **Mechanical Drawing**

Junior Class; Course III.

Practical problems in mechanism. Lobed and elliptic wheels; spur and bevel gearing; cams; link motion; quick return motion; belt gearing; coupling; riveting, etc.; tracing and blue printing.

Text-book: Engineering Drawing, French.

247. **Mechanical Drawing**

Junior Class; Course IV.

First half same as Course 245; platting; topographical drawing; tinting; railroad and map drawing; plans and details of buildings.

Text-book: ·Engineering Drawing, French.

248. **Machine Design**

Senior Class; Course III.

Necessary drawings for work under construction in the shops; details of steam and gas engine and electrical machinery. Design drawing required in graduation thesis.

Text-book: Engineering Drawing, French.

249. Mechanical Drawing

Senior Class; Course IV.

Railroad and map drawing; plans and details of bridges and buildings. Design drawing required in graduation thesis.

280. Architectural Drawing

Sophomore Class; Course VI.

A course in elementary drawing, involving simple architectural forms and familiarizing the student with their correct proportions. Lettering; study of the Orders.

Text-book: The American Vignola, Ware.

281. Freehand Drawing

Sophomore Class; Course VI

Pencil, charcoal, and pen renderings from casts of sculpture and architectural subjects. Flat and graded washes.

282. Building Construction I.

Junior and Senior Classes; Course VI

Study of building materials, their uses and forms; masons' carpenters', plasterers', and painters' work. Estimates and specifications.

Text-books: Building Construction and Superintendence, Part I and II, Kidder. Architecte' aand Builders' Pocket Book, Kidder.

283. Architectural Design

Junior Class; Course VI.

Application of the Orders; details of doors, windows, etc.; floor plans; elevations; sections of complete buildings. Problems in design in the more important historic styles.

284. Freehand Drawing

Junior Class; Course VI.

Pen and ink, and water color rendering.

285. History of Architecture

Senior Class; Course VI.

Study of historic styles and monuments of architecture, ancient, mediaeval, and modern. This course is given by illustrated lectures and text-book. The student is required to do research work in the library.

Text-book: History of Architecture, Hamlin.

286. Architectural Engineering

Senior Class; Course VI

Strength of materials in tension, compression, and shearing. Strength of beams, stiffness, deflection, best cross-sections, built up section; columns of wood, cast iron, steel, etc.; riveted joints; arches; foundations; walls; footings; plain and reeinforced concrete. Fire-proofing of buildings.

287. Building Construction II.

Junior and Senior Classes; Course VI

Study of building materials, their uses and forms; masons' carpenters', plasterers', and painters' work. Estimates and specifications.

Text-books: Building Construction and Superintendence, Part I and II, Kidder. Architects' and Builders' Pocket Book, Kidder.

288. Heat and Sanitation

Senior Class; Course VI.

Study of the various systems of heating and ventilating buildings, together with the apparatus used in each, such as boilers, fans, etc. Plumbing of buildings, including water and sewerage.

289. Professional Practice

Senior Class; Course VI.

Lectures and discussions on professional ethics, competitions, contracts, laws, etc.; and the study of the specific requirements of certain classes of buildings, such as school houses, churches, libraries, and hospitals.

290. Architectural Design

Senior Class; Course VI.

Study and design of large compositions rendered in water colors and other mediums. Plans and details of the heavier types of buildings; steel constructions, reinforced concrete, etc.

FORGE AND FOUNDRY

Assistant Professor Gantt

Instructor Heath

250. Forge Work

Freshman Class; Courses III, IV, V, VI.

Forge work consists of the study of Buffalo down-draft forges, a graduated system of exercises, 24 in number, embracing all the fundamental principles of forging, such as upsetting, bending, shaping, shouldering, punching, squaring, and assembling. The third term is devoted to steel work almost entirely, involving principles of drawing, hardening, annealing, and tempering.

Through the entire course, a working drawing of each exercise is supplied every student with full explanations, and demonstrations, when deemed necessary.

251. Forge Work

Freshman Classes; Courses I, II.

Forge work consists of the study of Buffalo down-draft forges; a graduated system of exercises, 21 in number, embracing all the fundamental principles of forging, such as upsetting, bending, shaping, shouldering, punching, squaring, and assembling. The third term is devoted to steel work almost entirely, involving the principles of drawing, hardening, annealing, and tempering.

252. Foundry Work

Sophomore Class; Courses III, IV, V, VI.

Names and uses of molders' tools; tempering and working of molding-sand; making and patching of molds. Work with patterns of various shapes and sizes, illustrating the principles of venting, gating, coring, etc. Grading and mixing of iron; charging and operating cupola. Several weeks are devoted to work in brass molding and brazing. The practical instruction is supplemented by a course of lectures covering the various phases of foundry work.

Text-book: Richard's Elementary Foundry Practice.

MACHINE SHOP

Assistant Professor Howard

260. Machine Shop

Junior Class; Courses III, IV, V.

The object of the course is to give to the student a knowledge of the elementary principles of machine shop work, and as much skill as may be acquired in the time available.

Very close measurements are required all of the way through the course, and the shop is equipped with suitable measuring apparatus for giving this practice.

Bench work is done first. Demonstration of proper methods of preparing and handling tools is given by the instructor and the students follow with work in chipping, filing, scraping, and polishing, under close supervision of the instructor in charge.

Bench work is followed by full explanations of the engine lathe, and demonstrations of the operations involved in doing simple turning. Lectures on machinists' tools are given before the machine work is begun.

The students progress from simple turning on the engine lathe through the more difficult operations, and thence to the drilling machine, shaper, planer, milling machine, and grinding machine.

All of the practice pieces are made according to blue prints.

Some machinist tools are made toward the end of the year, such as hammers, punches, plumb bobs, surface gages, etc.

Lectures covering various phases of machine shop work are given during the year.

261. Practical Mechanics

Junior Class; Courses III, IV, V.

A course of lectures covering some of the practical problems of Engineering will be given the Junior Class throughout the year.

These lectures will include explanations of principles of machine shop work, discussion of materials used in Engineering, their preparation, cost, etc., and manufacturing processes involved in the making of articles with which students come into daily contact.

WOOD WORK

Assistant Professor Gardner
Instructor Horning

The course in wood work does not aim to make the student a skilled workman, but rather to teach the proper use of tools, at the same time training the hand and the eye, to impress the importance of marking the exact dimensions, and to induce the proper reasoning necessary to reach a desired end.

The course covers two years, advancing through elementary principles and practice to pattern making, where a series of exercises teaches the fundamental principles. Then large patterns of machines under construction are undertaken, giving the student opportunity to learn commercial shop methods, and to apply intelligently all the principles of pattern making.

270. Wood Work

Freshman Class; Courses III, IV, V, VI.

Use, care and sharpening of tools, exercises to teach use of planes, saws, chisels, squares, etc.

Advanced exercises involving dove-tailing, glueing and polishing. Also full course with face plate and chucking work.

271. Wood Work

Freshman Class; Courses I, II.

This course is very much the same as Course 270, except that general principles are substituted for some of the details.

272. Wood Work—Pattern Making

Sophomore Class; Courses III, IV, V.

The principles of pattern making are taught with special exercises. Then large and complicated patterns of machines under construction are undertaken, and the large machines in the planing shops are explained and used as needed. Cabinet and furniture making are taken up to gain the use of machines not needed in pattern work.

CHEMICAL DEPARTMENT

Professor Brackett Director

CHEMISTRY

Professor Brackett
Associate Professor Henry
Assistant Professor Lipscomb
Assistant Professor Mitchell
Instructor Pearce

300. General Chemistry

Sophomore Class; All Courses

Inorganic Chemistry.

Text-book: Newell's Inorganic Chemistry for Colleges.

301. Chemical Laboratory

Sophomore Class; All Courses

Introductory work and qualitative anaylsis.

Text-book: To be selected.

302. Industrial Chemistry

Senior Class; Course II.
Senior Class; Course I. (elective)

The applications of chemistry in the more important arts and manufacturers. Among the subjects studied are: sulphuric acid; soda; chlorine; potash salts; fertilizers; lime; mortar and cements; glass; porcelain; illuminating gas; coal tar; mineral oils; vegetable and animal oils; soap, etc.

Text-book: Thorp's Outlines of Industrial Chemistry.

303. Chemical Laboratory

Junior Class; Courses I, II.

Qualitative and quantitative analysis. Assaying is given in course II.

Books used: To be selected; Fresenius' Qualitative and Quantitative Analysis; Lincoln and Walton's Quantitative Analysis; Notes on Assaying.

304. Agricultural and Organic Chemistry

Junior Class; Courses I, II.

The composition of plants, the sources of plant food, the composition of soils, the improvement of soils by chemical means, the composition and manufacture of fertilizers; and the leading facts and principles of organic chemistry.

Text-books: Johnston's Elements of Agricultural Chemistry, edited by Cameron and Aikman. Moore's Outlines of Organic Chemistry.

305. Chemical Laboratory

Junior Class; Course I.
Senior Class; Course II.

Quantitative analysis of fertilizers, soil, ashes of plants, water cattle foods and dairy products.

Books used: Bulletins of United States Department of Agriculture, containing analyses adopted by the Association of Official Agricultural Chemists; Lincoln and Walton's Quantitative Analysis.

306. Physical Chemistry

Junior Class; Course II.

Text-book: Jones; Introduction to Physical Chemistry.

307. Qualitative Analysis

Sophomore Class; Course II.

Text-book: Noyes & Smith's Elements of Qualitative Analysis.

308. Chemical Laboratory

Junior Class; Course II.

Text-book: Moore's Experiments in Organic Chemistry.

309. Historical and Stochiometrical Chemistry

Senior Class; Course II.

Text-books: Bauer's History of Chemistry; (to be selected)

310. Metallurgy

Senior Class; Course II.

Text-books: Wysor's Metallurgy; Hiorn's Mixed Metals; Notes.

311. Chemical Laboratory

Sophomore and Senior Classes; Course II.

Senior Class; Course I. (elective)

DEPARTMENT OF TEXTILE INDUSTRY

Professor Doggett, Director

CARDING AND SPINNING

Assistant Professor Meadows

400. Cotton Grading, Opening and Mixing, Pickers.

Junior Class; Course V.

A study of the physical properties of cotton to ascertain the grade, color, length of staple, and general spinning qualities. Mixing and the reasons therefor. The effect of blending on the resultant yarn. The machines and process in the picker room including the arrangement of machinery, construction of the machines, settings, speed, drafts, production, and calculations.

401. Cards, Railway Heads and Drawing Frames

Junior Class; Course V.

A study of the purpose of carding, construction of cards, setting, draft, speed of parts, production and calculations. The use of railway heads, and when this machine is a desirable one. The purpose of drawing, settings, weighting, production and calculations. A comparison of the merits of common and metallic rolls.

402. Fly Frames

Junior Class; Course V.

Purpose of this class of machines. Construction, care and operation. Distinction between slubbers, intermediates, fine roving and jack frames. Calculations for draft, twist, lay and tension gears. The construction of cones. Hanks and numbers.

Text: International Correspondence School series. Vol. 76.

403. Combers

Senior Class; Course V.

Sliver lap machine; ribbon lapper; comber. The purpose of the process; construction, operation and care of machines. Adjusting and timing. Calculations.

404. Spinning Frames and Mules

Senior Class; Course V.

Construction, comparison and operation of the leading makes of ring spinning frames. Size of rings, size of travelers, speed of spindles and of front rolls. Calculations.

Mule spinning: its desirability compared with ring spinning. A study of the construction and practice in the operation of the mule.

405. Yarn Manipulation

Senior Class; Course V.

Spooling, reeling, twisting and beaming. The making of special yarns. Fancy yarns. Schedules of machinery for mill equipment for various classes of product. Arrangement of machines, and a study of mill plans.

Text: International Correspondence School series, Vol.77, and Parker's Cotton Mill Calculations.

References: Nasmith Student's Cotton Spinning, Winchester's Cotton Yarn Manufacture and Taggart's Cotton Spinning.

406. Mill Economics

Senior Class; Course V.

Production vs. quality. Cost systems in spinning, weaving and finishing departments. Labor, power, superintendence and fixed charges. Utilization of waste. Business management.

407. Cotton Grading

(Elective)

One term's work in studying the properties of cotton as to grade, color, length of staple and spinning value. Two afternoons each week are required. Additional time given those desiring it.

WEAVING AND DESIGNING

Assistant Professor McSwain

410. Designing

Junior Class; Course V.

A study of the foundation and derivative weaves used in making cloth. The maximum number of ends of yarn per inch to be used with a given diameter and a certain weave. Method of making combination weaves and the drawing in and chain drafts for same. Calculations for harness eyes, reed numbers, ends in warps and reed widths for any construction and width. Calculations for yarn numbers to make any weight of cloth.

411. Designing

Senior Class; Course V.

Instruction is given in color designing to enable the student to combine two or more colors in a fabric with harmonious effects. A study of the different cloths on the market with special reference to the machines necessary in manufacturing same. A study is also made of leno designs, double cloth, figure, extra warp figuring, extra filling figuring, pile fabrics, chenille, swivel and lappet and jacquard designing.

412. Weaving-I

Junior Class; Course V.

Practical instruction is given in loom fixing, and the operation of different looms in the weave room. Special attention is given to the best settings to be obtained for an economical amount of power consumed by each loom; together with tests showing the maximum speeds for different width looms on different patterns.

413. Weaving-II

Senior Class; Course V.

With the aid of drawings, charts and actual loom attachments a study is made of the different looms such as two, three, four and five harness cam looms; Dobby shedding mechaanisms; jacquards; drop box looms; loose reed motions; extra selvage motions, plain, tape and center; take-up and let-off motions; automatic looms and special attachments for special weaves.

414. Weaving-III

Senior Class; Course V.

Actual production of patterns from original designs and samples on dobbies, box looms and jacquards. The students are required to make up their own designs; make calculations for reed widths and numbers, ends in warps, dressing of patterns, building pattern chains, cutting and lacing jacquard cords and to set the machines to produce same.

Text and Reference Books: Fox's Mechanism of Weaving; Holmes' Cotton Cloth Designing; Ivey's Loom Fixing; Posselt's Technology of Textile Design; Posselt's Jacquard Machine Analyzed and Explained.

TEXTILE CHEMISTRY AND DYEING

Professor Doggett

420. Textile Chemistry-I.

Junior Class; Course V.

This course includes the study of the manufacture, properties and technical analysis of the most important inorganic chemicals used in the textile industry; organic chemistry, alphatic series.

Text-book: Cohen's Theoretical Organic Chemistry.

421. **Textile Chemistry-II.**

Junior Class; Course V.

Preparation of chemical products, inorganic and organic, the processes used being based, so far as possible, upon the methods used on the large scale: technical analysis.

422. **Textile Chemistry-III.**

Senior Class; Course V.

Organic chemistry, carbocyclic series; general principles of organic synthesis; enzymic chemistry. Bleaching. Dyestuffs, their manufacture, properties, application and identification. Mechanical equipment of bleaching, dyeing and finishing establishments.

Text-books: Cohen's Theoretical Organic Chemistry; Huebner's Bleaching and Dyeing of Vegetable Fibrous Materials.

423. **Textile Chemistry-IV.**

Senior Class; Course V.

Preparation and study of the reactions of a typical set of alphatic and aromatic compounds, including several dyestuffs and complex bodies: bleaching, dyeing, calico printing; color matching; assay of dyestuffs and materials used in sizing and finishing.

Collins & Co.'s Record Book.

Reference books: Schultz and Julius's Organic Coloring Matters; Allen's Commercial Organic Analysis; Georgievic's Chemical Technology of Textile Fabrics; Knecht, Rawson and Rosenthal's Manual of Dyeing; Cain and Thorp's Synthetic Dyestuffs; Lafar's Technical Mycology.

ACADEMIC DEPARTMENT

ENGLISH

Professor Furman

Associate Professor Daniel

Assistant Professors Keitt, Bryan, Bradley

The purpose of the course in English is to enable the student to acquire the power to express his thoughts with clearness, precision and force; and to cultivate in him a taste for good literature. Elementary English grammar and the rudiments of composition are taught in the preparatory class.

501. English Grammar and Composition

Freshman Class; All Courses

The work begins with a thorough review of grammar. Attention is given also to word study, and to sentence-structure. Constant and frequent drill is given in theme writing in order to teach habits of correct expression. Methods of using dictionaries, encyclopedias and other reference books are explained practically to the students, who are expected to make use of the college library under direction of the instructors. Stress is put upon the reading of good literature, and full supplementary readings are required, with written reports thereupon.

Text-books: Lockwood & Emerson's Composition and Rhetoric; Buehler's Practical Exercises in English; Benson & Glenn's Speller and Definer; Webster's Academic Dictionary; and such classics as are assigned.

502. Composition-Rhetoric and American Literature

Sophomore Class; All Courses

The study of composition and rhetoric is pursued throughout the session, two hours a week being devoted to the subject. The work for the first term comprises a study of the whole composition, the development of the paragraph, a review of punctuation, and a careful study of the grammatical and rhetorical construction of sentences. The work of the second term takes up the consideration of the kinds of writing, attention being given to narration, description and exposition. The work of the third term is given chiefly to argumentation and public discussion. During all three terms short themes are required weekly, and the themes are rewritten after criticism by the instructor.

One hour a week during the session is given to the study of American Literature. The historical development of the literature, the influences that gave distinctive characteristics to the literature of each period, the lives of the chief writers, and a critical study of short seletions from each make up the principal work of the course. A course in reading embracing the best works of the leading American writers is assigned, and written reports are required.

Text-books: Scott and Denney's New Composition-Rhetoric, Woolley's Hand-book of Composition, Painter's Introduction to American Literature.

503. English Literature

Junior Class; All Courses

The work in this class begins with a critical study of Macaulay as an essayist. Warren Hastings is carefully read in class during the first half of the first term. The remainder of the term is given to the study of English literature down to the close of the Fourteenth Century. During the second term, the literature of our language from the death of Chaucer to the Georgian period is studied historically. In the third term a course is given in modern English writers. The work is supplemented by lectures.

Monthly essays of 700 to 800 words are required together with frequent oral readings embracing selections from the principal English Authors from Chaucer to Tennyson. Two hours per week are given to this course throughout the year.

Text-book: Pancoast's Representative English Literature.

504. Studies in Shakespeare

Senior Class; All Courses

During the latter half of the senior year a course in Shakespeare is given to the entire class. Three plays are read in class and the students are orally examined on all questions grammatical, historical and ethical which arise in the study of this author.

Monthly essays are required.

Text-books: Dowden's Shakespeare Primer and the Arden text of the plays are used.

HISTORY AND POLITICAL ECONOMY

Professor Morrison

Assistant Professor Holmes

The course includes South Carolina History, Commercial Geography, General History, United States History, Civics, and Political Economy.

The method of instruction is a combination of the text-book and lecture methods, with parallel reading as far as practicable under the instructor's direction. The class rooms are supplied with globes, charts, maps, and works of reference, in the use of which the young men are carefully trained. The students make liberal use of the many volumes of poetry, historical romance, biography and history found in the College Library.

The history of the State, of the South, and of the United States receive special attention. "A people that takes no pride in the noble achievements of a remote ancestry will never achieve anything worthy to be remembered by remote descendants."

511. South Carolina History

Freshman Class; All Courses

Text-book: Chapman's History of South Carolina.

512. Commercial Geography

Freshman Class; All Courses

Text-book: Olin's Commercial Geography.

513. General History

Freshman Class; All Courses

Text-books: Wolfson's Essentials in Ancient History; Harding's Essentials in Mediaeval and Modern History.

514. United States History,(a); Civics,(b)

Sophomore Class; Courses II, III, IV, V, VI.

Junior Class; Course I.

(a) Text-book: Hart's Essentials in American History.

(b) Text-book: Smith's Training for Citizenship.

515. Political Economy

Senior Class; All Courses

Text-book: Seager's Economics, Briefer Course.

MATHEMATICS

Professor Martin

Associate Professor Shanklin

Assistant Professors Hunter, Johnstone, Bramlett

This course presupposes a thorough knowledge of arithmetic and algebra through elementary quadratics (see requirements for admission, page 36.)

520. Algebra

Freshman Class; All Courses

Review of involution, evolution, theory of exponents and quadratics; theory of quadratic equations, simultaneous quadratic equations, indeterminate equations, ratio, proportion and variation.

Text-book: Well's Text-book in Algebra.

521. Geometry

Freshman Class; All Courses

Rectilinear figures; circles; similar figures; comparison and measurement of surfaces of polygons; regular polygons and circles; plane and solid angles; polyhedrons; cylinders and cones; spheres, spherical polygons and pyramids; volume.

Special attention is given to the formation, on the part of the student, of the habit of clear and accurate reasoning and concise expression.

Text-book: Durell's Plane and Solid Geometry.

522. Trigonometry

Sophomore Class; All Courses

Measurements of angles; trigonometric functions; solution of the right triangle, general formulae; solution of oblique triangles; miscellaneous problems; spherical right triangles; formulae for spherical oblique triangles; solution of spherical oblique triangles.

Text-book: Crawley's Short Course in Trigonometry.

524. Higher Algebra

Sophomore Class; Courses II, III, IV, V, VI.

Progressions; binominal theorem; theory of limits; convergency; divergency; and summation of series; undetermined coefficients; continued fractions; determinants; theory of equations.

Text-book: Well's Text-book in Alegbra.

525. Analytic Geometry

Sophomore Class; Courses II, III, IV, V, VI.
Junior Class; Courses II, III, IV, V, VI.

Cartesian and polar systems of co-ordinates; discussion and construction of loci; the straight line; transformation of co-ordinates; circle; parabola; ellipse; hyperbola; general equation of the second degree involving two variables, higher plane curves; solid analytic geometry; systems of co-ordinates; equation of the plane; the straight line in space; surfaces of the second order.

Text-book: Tanner & Allen's Brief Course in Analytic Geometry.

526. Differential Calculus

Junior Class; Courses II, III, IV, V, VI.

Differentiation of algebraic functions; trancendental functions; successive differentiation and development of functions, functions of two variables, tangents and asymptotes; envelopes.

Text-book: Snyder and Hutchinson's Calculus (Revised Edition).

527. Integral Calculus

Junior Class; Courses II, III, IV, V, VI.

Elementary forms of integration; rational fractions; integration of irrational fractions; successive reduction; integration of functions of two variables; geometrical applications; rectification of curves; cubature of volumes.

PHYSICS

Professor Poats

Mr. Dreher

The study of physics is begun in the sophomore year, and completed in that year by students taking the agricultural courses. All other regular students take physics, both theoretical and practical, during the junior year.

The teaching is by lectures and experiments, interspersed with quizzes, written exercises, and monthly reviews.

In the physical laboratory the student makes, under the supervision of an instructor, a carefully selected and graded series of experiments illustrating the principles of his theoretical course. These experiments serve further to confirm the principles and illustrate the bearing of the subject upon practical matters in general. In fact, the practical application of principles is constantly kept before the student in both lecture and laboratory work.

530. Principles of Physics

Sophomore Class; Course I

A complete course in the principles of physics, arranged with special reference to the needs of agricultural students.

Text-book: Millikan & Gale's First Course in Physics.

531. General Physics

Sophomore Class; Courses II, III, IV, V, VI

Properties of matter, physical measurements, mechanics of solids, liquids, and molecules, work, mechanical energy, and heat.

Text-book: Millikan & Gale's First Course in Physics.

532. General Physics

Junior Class; Courses II, III, IV, V, VI

Electricity and magnetism sound, and light.

Text-books: Reed and Guthe's College Physics; Professor's Notes.

533. Physical Laboratory

Sophomore Class; Course I

Experimental verification of the principles of theoretical physics taught in course 530. Careful quantitative experiments are required, and a neat record of the work is kept in every case.

534. Physical Laboratory

Sophomore Class; Courses II, III, IV, V, VI

A course of experiments paralleling the work of theoretical course 531.

535. Physical Laboratory

Junior Class; Courses II, III, IV, VI

This course covers electricity and magnetism, sound, and light. It completes the series of experiments following those of 534. The grade of the work is somewhat more advanced, and the student is put upon his own resources to a greater extent.

For description of equipment, see another page.

BOOKKEEPING

540-541. Bookkeeping

Freshman Class; Courses I, II.

The course in bookkeeping is designed to give the students a good working knowledge of the subject. It has been introduced with a special view to enable Agricultural students to keep neat and accurate accounts of all business transactions relative to the farm. The course seeks to familiarize the student with business methods in keeping accounts with parties, firms, banks, etc., and he is given abundant practice in making out business papers, of ordinary occurrence, and in making trial balances, balance sheets, statements etc.

Text used: Sadler and Rowe's "Commercial and Industrial Bookkeeping."

GERMAN

Professor Doggett

This course is designed to give the student a thorough knowledge of the fundamental principles of German grammar, mastery of the main facts of consonant mutation, the ability to read with ease the scientific literature of German, and to develop a "sensitive and trustworthy feeling for the language."

550. German I.

Junior Class; Course II.

The essentials of German grammar, collateral reading; German prose composition.

551. German II.

Senior Class; Course II.

Study of German words and idioms; German-English cognates; translation of literary and scientific German.

Text-books: Paul V. Bacon's German Grammar for Beginners; Hasting's Studies in German Words; Bacon's Im Vaterland; Bacon's German Composition; Goethe's Die neue Melusine or similar text; Wallentin's Grundzuege der Naturlehre.

Reference books: Bellows' German Dictionary; Eberhard-Lyon's Synonymisches Handwoerterbuch.

MILITARY DEPARTMENT

1st. Lieut. J. M. Cummins, U. S. Army, Director. Commandant of Cadets

MILITARY SCIENCE AND TACTICS

Lieutenant Cummins

The course in military instrution, as prescribed and followed, is both theoretical and practical.

In addition to the benefit which the general government derives from the military instruction given at this and other colleges, it is believed that the discipline enforced, the habits of obedience and punctuality inculcated, the improvement in bearing and appearance of those instructed, and also the practice in directing and commanding others, which nearly all in the course of time get, is of immense benefit to the student individually.

Theoretical

600. Tactics and Elements of Military Science

Junior Class; All Courses

The theoretical instruction, consisting of talks and lectures, includes the following, as prescribed by the War Department: Infantry Drill Regulations, Small Arms Firing Manual, Field Service Regulations, and Manual of Guard Duty.

Practical

601. Military Drill

Required of all Cadets

Infantry drill, including close and extended order; advance and rear guards and outposts; marches; the ceremonies of review, inspection, parades, guard mounting, and escort of the colors; guard duty.

602. Gallery and Range Practice, Field Engineering, Military Topography and Sketching

Senior Class

Complete course of instruction in rifle practice on target range, preceded by a course in gallery practice intended to teach the elements of holding the rifle, sighting and firing.

Elements of construction of military bridges, intrenchments, and other military engineering features.

Hasty road and position sketching; map reading.

GROUNDS, BUILDINGS AND EQUIPMENT

Location

The College is located on the Fort Hill homestead of John C. Calhoun, on the dividing line between Oconee and Pickens Counties, in the picturesque foothills of the Blue Ridge. It has an elevation of 800 feet above sea level, and commands an excellent view of the mountains to the north and west, some of which attain an altitude of nearly five thousand feet. The climate is invigorating and healthful, and the surroundings are in every way favorable to the highest physical and mental development.

The College is one mile from Calhoun, a station on the main line of the Southern Railway, and two miles from Cherrys, on the Blue Ridge Railroad. By means of these roads and their connections, the College is easily accessible from all parts of the State. It is connected by telegraph and long distance telephone with all parts of the country. The post office is conveniently situated on the campus, and receives five daily mails.

Campus and Farm

The College grounds occupy about 1544 acres of land, including the campus, sites of buildings and residences, the College farm, and the Experiment Station grounds. The campus, including about 200 acres, is laid out in walks, drives, and lawns, and is shaded by a beautiful grove of native forest trees.

The Main Building, Barracks, Etc.

The Main Building is a three-story brick structure, 130 by 149 feet, trimmed with gray sandstone. It contains 21 rooms, including recitation rooms, library and reading room, literary society halls, physical laboratory, and the offices of the President, the Commandant, the Treasurer, and a reception room. Adjoining this building is Memorial Hall, the College Chapel, which has a seating capacity of about one thousand. It is used for religious services and as an assembly room. In the tower of this building is a tower clock. The building is provided with steam heat and electric lights.

Division of Physics

The physical lecture room and laboratory is situated in the main College building, is 33 by 60 feet, and is well equipped with apparatus for both the lecture and the experimental work of a general course in physics.

The Cadet Barracks comprise three large brick buildings. One is four stories high and contains 197 rooms for students, two Y. M. C. A. rooms and a large Y. M. C. A. assembly hall. In the basement of this building is the dining hall 134 by 44 feet and the kitchen 50 by 37 feet.

The second building is 199 by 42 feet, and contains 104 rooms. The third building is 45 by 190 feet and contains 111 rooms. These buildings are heated by steam and lighted by electricity, and have an abundant supply of pure water. The rooms in the barracks are furnished with single-width iron cots and other necessary appointments. The dining hall is well supplied with table linen, silverware, and china, and the kitchen is furnished with modern culinary appliances.

The bathrooms and closets are located in brick buildings apart from the barracks and connected with them by covered gangways.

The General Water Supply is collected from springs and surface streams, and pumped from two stations into a standpipe one hundred feet high, having a capacity of 130,000 gallons. From this it is distributed through mains to the various College buildings and to all parts of the campus. This water is used for fire protection, sewerage, etc.

The Drinking Water Supply is pumped from a bold spring through the barracks, in a continuous stream. It is thus furnished fresh, pure and cold. This and all sources of water supply are kept under constant and strict surveillance, and the waters are frequently analyzed as a precaution against contamination.

The Sewer System.—All of the larger buildings and most of the residences are connected with an adequate sewer system, which empties into the Seneca River more than half a mile from the campus.

Light and Heat.—All of the College buildings and most of the residences on the campus are lighted by electricity furnished from the central power station. The eight principal College buildings are heated by steam.

Central Power and Heating Plant.—This plant contains two 150 H. P. Stirling water-tube boilers, and two 100 H. P. Lombard return tubular boilers, with the necessary pumps, feed water heaters, and other auxiliary apparatus.

The power equipment consists of one 114 H. P. Fleming side-crank engine, direct connected to a 70- K. W. 2,300 volt, three-phase alternator with direct connected exciter, and one 122 H. P. Fleming four-valve engine direct connected to a three-wire 75 K. W. direct current generator.

A 75 K. W. rotary converter is used to convert from one kind of service to another.

The switchboard equipment consists of three standard blue Vermont panels, and three black enameled slate panels, all equipped with the latest and best electrical instruments and appliances. The alternator is connected to the rotary converter through the 25 K. W. transformer. All the machinery is of the General Electric Company's make.

The building is 40 by 80 feet, is a single story of brick and cement blocks, with metal roof.

The plant complete cost about $25,000, and is in every way modern and up to date. It furnishes steam heat for the Barracks and other College buildings, and electric lights and power to every department of the College and the residences of the community. Two pumping stations, situated about one-half mile distant, are electrically operated from this plant. These pumping plants have both steam and electric pumps and an aggregate capacity of 1,200 gallons per minute.

Agricultural Buildings and Equipments

The Agricultural Hall is a building 146 by 94 feet, in colonial style, and constructed of red side-cut brick, with columns and trimmings of oolitic limestone. It is furnished with a complete system of electric lights, water and sewer connections, and steam heat; and provides class rooms and laboratories for instruction in agriculture, horticulture, soil physics, botany and bacteriology, zoology and entomology, geology and mineralogy, and offices and laboratories for the Experiment Station. It also contains the museum and gymnasium hall.

The Horticultural Grounds embrace an area of twenty acres. Three acres are devoted to apples for experiment purposes, one acre to peaches, one acre to grapes, one acre to pecans, one acre to nursery, ten acres to experiments with small fruits and vegetables, and three acres to ornamental trees, shrubs, and flowers.

The Greenhouse is 21 by 140 feet, and is heated by hot water. It is used for class instruction in ornamental horticulture and for experiment work. The house now contains one thousand large pot plants of various kinds and six thousand small plants used for bedding purposes on the College campus.

There is another greenhouse with a center building 30 by 30 feet, and two wings, each 20 by 30 feet.

The Cannery is a frame building 25 by 35 feet, It is equipped for canning fruits and vegetables of all kinds.

The Veterinary Hospital is a two-story frame building 48 by 65 feet, with basement 18 by 30 feet. It is furnished with electric lights, hot and cold water, and is heated by means of stoves. The basement contains a store room, dog kennels and a small room for hot water plant, etc. The class room, office, pharmacy and a well equipped clinic and operating room are on the first floor. A laboratory for class work—a private laboratory and a store room for supplies are on the second floor.

The stable, containing seven box stalls, grain room and hay room, are in an adjoining building.

There is a well-sodded lot containing about two acres connected with the hospital. It is fenced with woven wire and divided into three paddocks. A laboratory for the preparation of anti-hog cholera serum—buildings for hogs, feed, etc. are on land adjacent to—but at a safe distance from the Veterinary Hospital.

The Three-Story Dairy Building just completed is built of red brick, and is one of the most modern and best equipped buildings of its kind to be found anywhere in the country. It contains the offices of the Animal Husbandry and Dairy Division, of the Extension Division, and a number of large, well lighted, properly ventilated class rooms and laboratories together with a large assembly room for farmers' meetings and short course work. It is splendidly equipped with the latest modern machinery for manufacturing dairy products, separating, testing, and marketing milk, experimental work, and for teaching modern methods of dairying.

The new **Dairy Barn** will accommodate both the Experiment Station and College herds. It is large enough to hold 120 cows with separate box stalls for bulls and young stock, and all the feed required for these animals.

There are also four large cement silos conveniently located for feeding. The floors are of cement with cork brick for the cattle to lie on. The lighting, ventilation, sanitation, stanchions, stalls, and the equipment for cleaning and feeding and handling the milk are the most modern to be found in the country.

Farm Buildings.—The College farm is provided with commodious barns and other farm buildings of modern design, which are described more fully in connection with the equipment for instruction in Agronomy.

Division of Agronomy

The class room, the laboratory, and the office of the Agronomy Division are located on the first floor of the Agricultural Hall. The laboratory is supplied with the necessary equipment for the study of the various types of farm crops and the testing of seed for purity and germination.

The College farm has a large mule barn, implement and wagon sheds, and two large cribs for the storage of corn.

The College Farm is well supplied with agricultural machinery and implements, such as the following: Reapers and binders, corn harvesters, mowers, hay rakes, single and double-row corn planters, cotton planters, ensilage cutter, shredder, gasoline engine, various kinds of mold board and disc plows, riding and walking cultivators, harrows and weeders, and fertilizer and grain drills.

Division of Geology and Mineralogy

The division of geology and mineralogy occupies three rooms on the second floor of the Agricultural Building.

The systematic collections contain about 2500 labeled specimens of rocks, minerals and fossils. These are exhibited in glass cases in the laboratory and the museum, and are available to students and the public. A collection of the minerals and rocks of South Carolina is a prominent feature of the exhibit. There is also an unlabeled collection of minerals for practice in identifying species at sight; and unlabeled collections of the most important minerals are provided for determinative work in the laboratory.

The laboratory is supplied with water and gas and all apparatus and reagents necessary for the determination of minerals by means of their chemical and physical properties. A chemical balance, a petrographic microscope, a photomicrographic camera, and all essential accessories, are also provided.

The class room is supplied with large physical wall maps of the world and of all continents, a complete series of topographic contour maps, furnished by the United States Geologcial Survey, an 18-inch terrestrial globe, a 20-inch relief globe, a set of geological and geographical relief models, and several hundred lantern slides.

The geographical department of the College library contains the principal standard works of reference in geology and mineralogy, and receives all the publications of the United States Geological Survey as issued, including annual reports, monographs, geologic folios, and bulletins.

Soil Physics

The soil physics laboratory is located on the ground floor of the Agricultural Hall and is provided with apparatus for the determination of water content, absorptive capacity, water holding power, and other physical properties of soils, and for performing experiments in evaporation, percolation, capillarity, etc., and making mechanical analyses.

Division of Horticulture

The classroom of the Horticultural Division is located on the first floor of the Agricultural Hall. The greenhouse, the hotbeds, and the cold-frames are located in the Horticultural grounds, where the principal practical work is done. The gardens, orchards, and the vineyards are field laboratories for instruction in horticulture.

Division of Veterinary Science

The veterinary hospital has been described in the account of "Grounds and Buildings" on the preceding pages.

The classroom, laboratory and the office of the Veterinary Division are located in the Veterinary Hospital. The laboratory is supplied with microscopes, incubators, sterilizers, chemicals, skeletons, anatomical specimens, plaster casts, and other equipment for technical work.

Division of Dairying and Animal Husbandry

The classrooms and laboratories are located in the new Dairy Building.

The courses offered in this division treat in as direct and practical a way as possible all subjects which pertain to the breeding, feeding, judging, selecting, improvement, and care and management and marketing of live stock, and management of stock farms.

A thorough training is given in the manufacturing of keeping records and managing dairy herds.

The division is well equipped with all the prominent breeds of beef and dairy cattle, five different breeds of hogs, several types of horses, and a large number of mules, and the student is given every opportunity to become proficient in the judging, feeding, and management of live stock.

Division of Zoology and Entomology

Office and Research Laboratory.—The main office and research laboratory of this Division is located on the second floor of Agricultural Hall. The office is equipped with modern records systems for operating laboratory, office and field work. The laboratory is equipped with compound microscopes, photographic outfit, microtome, binocular, dark ground illuminator and incubators. The entomological collections are kept on this floor. The economic forms, arranged according to food plants, are kept in the museum while the systematic and research collections are kept in standard Schmitt boxes in the laboratory.

A carefully selected entomological library is kept in the main office.

General Laboratory.—This laboratory is located on the first floor of Agricultural Hall, and is equipped with simple and compound microscopes, dissecting instruments, lantern slides, models and charts. A new locker system has been installed and the laboratory is also provided with the most modern laboratory tables. The laboratory chairs are all adjustable in order to provide comfort to the student. This feature of the laboratory prevents physical unrest during long laboratory periods.

Insectary.—The insectary is located on the ground floor of Agricultural Hall, and is equipped with the various types of ordinary breeding cages; also the various types of root, parasite and ant cages; several types of Berlese collecting apparatus are provided, as well as a system for temperature and moisture control for biological purposes. A complete system of spray and fumigating apparatus is housed in the insectary.

Field Laboratories.—Two field laboratories are in operation and the student has access to the methods employed in these laboratories as well as the current records.

Division of Botany and Forestry

The laboratory and classroom are located on the first floor of Agricultural Hall. They contain a good equipment for satisfactory work in botany, forestry and bacteriology, including 25 dissecting microscopes, 27 compound microscopes, microscope slides, lantern slides and charts, Zimmerman and Minot rotary microtomes, embedding baths, balances, incubator, Arnold & Koch sterilizers, autoclaves, dry ovens, anaerobic apparatus. The students have access to a small botanical and bacteriological library.

A creditable beginning has been made in collecting a herbarium. The herbarium has been installed in new insect-proof cases on the museum balcony. The general collection includes the Anderson herbarium of 2,500 mounted specimens, about 700 mounted specimens of American violets, and 1,000 mounted specimens of flowering plants of Central New York, as well as a set of the F. V. Coville plants, of New York State. The South Carolina herbarium contains over 1,200 mounted specimens, representing the South Carolina flora, and is kept separate from the general herbarium.

Some material has been collected and placed in the museum for exhibition purposes, but as soon as these collections are completed they will be used as demonstration material for classwork.

Engineering Buildings and Equipment

The Mechanical Engineering Building is a substantial brick structure containing about 35,000 square feet of floor space. On the first floor are mechanical laboratory, machine shop, wood shops, forge shop, and foundry. On the second floor are the offices and the drawing and designing rooms. The third floor is devoted to class rooms and to the division of civil engineering.

The Electrical Instrument Laboratory is a brick building of special design, arranged especially for delicate instrument work.

The Dynamo Laboratory is a modern brick structure 37 by 80 feet. Besides containing the dynamo electric machinery for instructional use it also contains the electrical engineering lecture room.

Division of Mechanical Engineering

This laboratory is situated on the ground floor of the Engineering Building, and occupies a room 51 by 45 feet, and contains the following equipment:

For Steam Engineering.—One 15 H. P. horizontal, locomotive type boiler; one 6-H. P. vertical boiler; one 6-H. P. Erie, plain slide valve steam engine, throttling governor; one 5-H. P. vertical engine built by students; one 15-H. P. Payne high speed automatic cut-off engine; one Corliss cross compound engine, arranged to run either condensing or non-condensing and with either or both cylinders with high pressure steam; one 7-K.W. Curtis steam turbine non-condensing, direct connected to a two-pole direct current compounded generator; one Wheeler surface condenser, with combined air and circulating pumps; one set steam gauge testing apparatus; one Carpenter's Separating Calorimeter; two Carpenter's Throttling Calorimeters; six steam engine indicators of various makes; four injectors; two draft gauges; five steam gauges.

For Hydraulic Engineering.—One power triplex pump; one Pelton water motor; two hydraulic rams; three duplex pumps of different makes; one weir; one Hook gauge; one altitude gauge.

For Compressed Air.—One Clayton air compressor, water jacketed; one improved air motor.

For Fuel and Lubricants.—One Carpenter's coal calorimeter with scales, balances and oxygen generating device; one standard viscosimeter; one Thurston friction tester.

For Testing Materials.—One 100,000-pound Olsen automatic vertical testing machine driven by 5-H. P. Westinghouse electric motor, and fitted for either tension or compression; one Fairbank's cement testing machine; one Vicat needle with proper sieves and moulds; one graduated flask for determining specific gravity; one moist closet for storage; one 3,000-pound tranverse testing machine.

The laboratory also contains a 5-H. P. Otto gasoline engine; one Ericsson hot air engine; a 6-H. P. transmission dynamometer, graduated to read horse-power direct and built by students; four platform scales; four spring balances; seven mercury thermometers; one electrical resistance thermometer; two Bristol thermo-couples for reading temperature to 2,000 and 2,900 degrees F. respectively. All apparatus is so arranged that it may be used for separate or combined tests. Besides the apparatus in this room, the apparatus in the Power Station and the Pumping Stations are available for instruction and tests.

Division of Electrical Engineering

This division occupies two single-story brick buildings, heated by steam and lighted by enclosed arc and incandescent lamps.

Electrical Instrument Laboratory.—This is a separate building, especially designed for delicate instrument work. Its equipment contains the following instruments and apparatus: Leeds and Northup potentiometer with certified standard resistances for measuring both current and potential; Kelvin deka ampere balance; Weston laboratory standard voltmeter with multipliers; Becker analytical balance and weights; two 1-6-H. P. Crocker Wheeler motors; sixteen galvanometers. (including tangent, Kelvin, D'Arsonal and ballastic instruments); nine standard resistance sets; three standard resistance and Wheatstone Bridge sets; dial decade standard test set; four meter-wire bridges; one magnetometer; two standard condensers; commercial condensers; Weston and Carhart-Clark standard cells; ammeters; voltmeters; rheostats; keys; switches; storage cells; primary cells, and other miscellaneous apparatus; also a quantity of special apparatus made in the College shops and laboratories.

The instruments in the above equipment are from such makers as Elliott Brothers; Nadler Brothers, Leeds and Northup, Queen and Company, Weston Electrical Instrument Company, etc.

Dynamo Laboratory.—This building is 37 by 80 feet, with basement. The main floor is divided into a lecture room 35 by 25 feet, and a laboratory 35 by 53 feet. The basement contains a supply room and a large dark room.

The lecture room has raised seats, and is equipped with instruments, illustration models and other demonstration apparatus, including an electro-magnet capable of supporting the weight of two tons.

The dynamo laboratory equipment contains the following instruments:

Voltmeters.—Six Weston, six General Electric Co. Thomson, one Jewell, one Whitney, one Ayrton and Perry, one Hoyt, one Kelvin electrostatic, one Cardew.

Ammeters.—Three Weston, five Weston millivoltmeters with current shunts, twelve General Electric Co. Thomson, one General Electric Co. hot wire, one Westinghouse portable, one Siemens Electro-dynamometer, one Jewell.

Wattmeters.—Three Weston indicating, two General Electric Co. Thomson indicating, two General Electric Co. Thomson recording, one General Electric Co. induction.

Miscellaneous Instruments.—Two Schaeffer and Budenberg portable tachometers, speed counters, stop watches, current and potential transformers for instruments, etc.

Direct Current Dynamos: 17-K. W. Lundell, 15-K. W. Mather, 2½-K. W. Crocker-Wheeler, two 2-K. W. Kester, 15-H. P. Kester, 10-H. P. Kester.

Arc Lighting Apparatus: Brush and Thomson-Houston generators, a General Electric Company constant current transformer, open and inclosed arc lamps.

Alternating Current Apparatus: 15-K. W. General Electric Company, single, two, three and six phase revolving field generator, complete with marble switch board and full set of indicating instruments. 7½-K. W. General Electric Company single, two and three phase rotary converter, 7-K .W. three phase converter built by students. General Electric Company single, two and three phase induction motors, three 3-K. W. and three 5-K. W. constant potential transformers. General Electric Company condensers, assortment of coils, models, etc.

Miscellaneous: 50-H. P. high speed McEwen automatic engine, 3-ton portable crane, prony brake, rheostats, circuit breakers, switches, fuse testing apparatus, lightning arresters, etc.

The dark room is equipped with apparatus for high potential, high frequency and X-Ray work, and a Deshler-McAlister central station photometer with rotating stand for incandescent lamp testing.

The machinery in the dynamo laboratory is driven by the 50-H. P. engine and by motors. Steam and electric power for these is furnished by the central power plant, described on another page. Students have access to this plant, and to the other electrical equipment of the College. They are thus enabled to study the practical working of a combined electrical power, light and heating plant, and to study the problem of power distribution and utilization from a practical example.

Division of Civil Engineering

The collection of field instruments contains the following:

Two complete transits with solar attachments; three engineer's transits; four railroad compasses; two six-inch vernier compasses; one precise level; three twenty-inch wye levels; one dumpy level; two architect's levels; one convertable architect's level; one drainage level; one Locke hand level; one binocular hand level; two stadia hand levels, with a supply of self-reading and target rods. One complete plane table; a Price current meter, with steel boat and truck; sextant; aneroid barometer; flag poles; tapes; chains and all necessary accessories.

The office equipment includes planimeter, slide rules and drafting instruments.

Division of Drawing and Designing

This division is located on the second floor of the Engineering Building, and occupies seven rooms, two of which are used by the freshman class in Freehand Drawing, two by the freshman class in Mechanical Drawing, one by the sophomore class in Mechanical Drawing, one large room by the junior and senior classes in Mechanical Drawing, Architectural Drawing, and Machine Design, the other as an office.

These rooms were designed for the use of the division, and are of ample size, well lighted, and well equipped with individual lockers for about 500 students, and drawing tables for about 25 students at a time in each room.

They also contain a large number of models of various kinds; reference books and tables; and a display of catalogues and drawings from manufacturing firms, and of the best student work, all of which are of great benefit to the student in his work. The more expensive and less used instruments are kept in the office for the use of any student needing them. Two blue print rooms adjoin the other rooms of the division, and are well equipped with all necessary frames and apparatus for printing by electricity and sunlight. All students are required to furnish their own instruments, boards, T squares and other material. They are advised to buy these at the Cadet Exchange, where samples can be seen and wholesale prices obtained. All drawing tools used by students must be approved by the instructor in charge; second-hand or inferior instruments will not be accepted. Students make a mistake in buying low-priced instruments, which appear to be of good quality, but are inferior and will not give good service, soon necessitating the purchase of another set.

Division of Forge and Foundry Work

Forge Shop.—The forge shop is located in a wing of the Mechanical Engineering building, and occupies a room 37 by 44 feet. The equipment is installed under two separate systems. One system consists of 18 Buffalo down draft forges; 18 Eagle anvils equipped with small tools; a 60-inch exhaust fan; a No. 4 direct connected pressure blower; a drill press; and emery grinder; a bending cone; a Buffalo iron shear; two swage blocks; a vise and work bench. The other system consists of 18 Sturtevant down draft forges; 18 Eagle anvils thoroughly equipped with small tools; a 60-inch exhaust fan, and a No. 4 pressure blower, both directly connected to electric motors.

The Foundry occupies a space of 43 by 76 feet, and is free from posts and other obstructions. It is equipped with a 26-inch Victor Colliau's cupola; a No. 7 pressure blower; a Millets core oven; a large Paxon brick core oven; a two-ton post crane; eight improved molders' benches with full equipment of molders' tools for eighteen students; also, a full equipment of hand, bull, and truck ladles.

The brass foundry is equipped with an 18-inch brass furnace; a drying stove, clamps, boards, and flasks for molding; two graphite crucibles and crucible tongs; one Ferrofix brazing machine, with full equipment for doing diversified cast iron brazing.

Division of Machine Work

The Machine Shop occupies the ground floor and part of the basement of the south-west wing of the Engineering Building, the main floor being 45 by 100 feet, lighted from one end and both sides, and steam heated.

The equipment is as follows; suitable benches and vises for chipping, filing, etc., and for assembling machines; one 18-inch 12-foot engine lathe; one 18-inch 8-foot engine lathe; eleven 14-inch sixfoot engine lathes; one 10-inch four-foot turner's lathe; one 15-inch 8-foot speed lathe; two universal milling machines; two 18-inch vertical drilling machines; one

28-inch vertical drilling machine; one 22-inch 6-foot planer; one universal tool and cutter grinder; one 10-inch by 32-inch universal grinding machine; one 14-inch shaping machine; one 10-inch slotting machine; one 22-inch wet emery tool grinder; one twist drill grinder; one dry emery grinder; one 36-inch grind stone; one power hack saw; one fan blower; forge, anvil, and set of smith's tools.

Twelve sets of tools in portable cases are provided for the use of the students, each set containing an assortment of chisels, files, cutting tools for lathe work, hammer, monkey wrench, steel scales, screw driver, spring calipers, dividers, scriber, rule, center punch, center gauge, one inch micrometer caliper, oil can and cotton waste.

A tool room is located in one end of the shop, in which is kept an extensive assortment of tools, some of which are: a set of twist drills from 1-16 to 2 inches; a set of machinist hand reamers from 1-8 to 4 inches; a set of Morse standard taper reamers; a set of taper pin reamers; a set of internal and external caliper gauges from ¼ inch to 2½ inches; a set of U. S. standard taps and dies from 1-16 to 1¼ inches; a set of clamps, dogs, lathe, planer and shaper tools, milling machine cutters and emery wheels; a center grinder; standard gauges; and internal and external micrometer calipers from 0 to 6 inches.

A supply of steel and brass, and a large assortment of screws, bolts, nuts, etc., are kept in stock.

All of the machines are driven from one line shaft, running the full length of the shop, and driven by a 15-horse power electric motor that was built in the shop.

Artificial lighting is accomplished by means of four arc lamps.

Division of Woodwork

The Woodwork Division consists of two shops, both on the ground floor. The first, 37 by 100 feet, is divided into two class rooms, both of which are supplied from one well-equipped tool room.

The freshman classroom contains eight turning lathes, and fifteen work benches, each supplied with a full set of tools.

The sophomore classroom is equipped with eight turning lathes with tools, eighteen work benches, and ninety sets of bench tools, a separate set for each student. This room also contains a large pattern lathe, one 30-inch band saw, one jig saw, two grind stones, and one universal trimmer.

The other shop is equipped with planing mill machinery, consisting of a double-roll planer, one rip saw, one cross-cut table saw, one swinging cut-off saw, one lathe with 12-foot bed, one jointer, one moulding machine, one tenoning machine, one doubleheaded shaper, one single spindle carver and shaper, one mortising and boring machine, one re-saw, one swinging arm sand papering machine, and an assortment of benches, clamps, glue pots, etc.

This shop is 40 by 100 feet, and is driven by a 20-H. P. electric motor. Each classroom also has its individual motor drive. A lumber yard and steam dry kiln adjoins.

Chemical Buildings and Equipment

The original chemical laboratory is a two-story brick building, 50 by 80 feet, covered with slate and finished inside with Southern pine. Overlapping this at one corner, and connected with it by a glass-enclosed passage, is a new somewhat similar building, 55 by 86 feet, of modern style and handsome design. This double building, which is well ventilated, heated by steam and lighted by electricity, constitutes a commodious structure adequate to all the needs of the department.

On the first floor of the old building, which is used for academic work, there are five rooms. Three of these are employed as laboratories for agricultural seniors and juniors. Of the remaining rooms on this floor, one is a balance room, while the other is used as a classroom.

On the second floor of this building there are two large laboratories, one for the juniors in analytic chemistry, the other for the sophomores in general chemistry. A third, and smaller room, is used as a balance room.

The junior laboratory will accomodate 72 students, 36 at a time; the sophomore laboratory, 120 students, 60 at a time. The laboratories are all provided with hoods for carrying off noxious gases, convenient working tables, water, gas, electric lights, and all necessary appliances for experimental work.

The basement of the building is used for assaying, for the preparation of distilled water, and for storage. The air pump and the mixer of the gas machine for supplying the laboratories with gas are placed in this basement and connected with the generator, which is buried 85 feet from the building.

On the first floor of the new building there are nine rooms, all of which are appropriated to state analytical work. On one side of the wide hall, which extends the entire length of the building, are the rooms for the analysis of fertilizers. Three of these rooms are used, respectively, for the determination of phosphoric acid, nitrogen and potash; the fourth as a balance room; the fifth and last as a sample room. On the other side of the hall there are four rooms. The largest of these is a laboratory used for state analytical work. Adjoining is a balance room, in which provision is made also for electrolytic apparatus. Of the remaining rooms, one is used for water analysis and for miscellaneous analytical work, the other as the office of the director.

On the second floor of this building there are seven rooms; a lecture room, and six smaller rooms, which are used for recitations, cabinets, apparatus, chemicals, library, and professor's laboratory.

The lecture room will seat 170 students, the seats being arranged in tiers.

The hoods in each buliding are all connected by earthenware pipes with a tightly built room just under the roof. Each of these rooms is connected with a large ventilator.

The rooms in the basement are used for assaying ores, and for storage. In one of these rooms there is a gas machine for supplying gas especially to the new building, though this machine and the one in the old building are so arranged that either may be used to furnish gas to both buildings in case of necessity.

Textile Building and Equipment

This building is a brick structure of modern cotton mill design, 168 by 75 feet. It is of the slow burning type, built according to fire insurance regulations, after plans of an experienced mill engineer. The building, although designed for educational and experimental purposes, containing office, lecture-rooms and laboratories, retains the more prominent features of a typical Southern cotton mill. This affords the student an opportunity of gaining many points of valuable information in connection with mill construction, along with the manipulation of cotton fibres and the study of cotton mill processes and operations.

The first floor is occupied by the picking, carding and spinning machinery, a lecture room, the main office, an exhibit room and the departmental library. The machinery on this floor is driven by two electric motors, one a 30-H. P., 220-volt, direct current Westinghouse motor, driving the carding machinery, and a 20-H. P., 220-volt, direct current General Electric Company motor, driving the spinning machinery.

The second floor is occupied by two weave rooms, three lecture rooms, laboratory for organic chemistry, an office and two store rooms. The power looms on this floor are driven by a 20-H. P., 220-volt, direct current General Electric Company motor.

The basement, which is situated under the north end of the building is occupied by the dye-house and laboratory for industrial chemistry.

The building is equipped with a system of "Vortex" humidifiers from the American Moistening Company; steam-heating system and automatic fire-sprinklers from the

D. A. Tompkins Company; shafting, pulleys and hangers from Jones & Laughlin, Ltd., and from T. B. Wood's Sons.

Division of Carding and Spinning

Picker Room

The equipment of this division is as follows:

Pickers.—One Atherton automatic feeder; one Atherton breaker lapper; one Atherton finisher lapper; pickers are equipped with Brown-St. Onge patent adjustable grid bars.

Card Room

Cards.—One Mason 40-inch revolving top flat card.

Double Carding Process.—One Saco & Pettee 40-inch breaker card; one Saco & Pettee 20-inch improved lap winder; one Saco & Pettee 40-inch finisher card.

Combing.—One Mason sliver lapper; one Mason, six head, ribbon lapper; one Mason, six head, comber.

One Whitin sliver lapper; one Whitin four head, ribbon lapper; one eight head, Whitin high speed comber.

Railway Heads.—One Saco & Pettee railway head, with evener motion, stop motion and metallic rolls; one Mason railway head, with evener motion, stop motion and metallic rolls.

Drawing Frames.—Two Saco & Pettee drawing frames, four deliveries, stop motions, metallic rolls; one Mason draw frame, four deliveries, stop motions and metallic rolls.

Fly Frames.—One Saco & Pettee 12 by 6 inch, 40-spindle slubber, with latest differential motion; one Saco & Pettee 8 by 4 inch, 60-spindle intermediate roving frame, with latest differential motion; one Saco & Pettee 6 by 3 inch, 80-spindle, fine roving frame, with latest differential motion; one Woonsocket 6 by 2½ inch, 96-spindle jack roving frame, with Daly's improved differential motion.

Ring Spinning.—One Saco & Pettee combination warp and filling ring spinning frame, 128 spindles; one Mason combination warp and filling ring spinning frame, 112 spindles; two Fales & Jenks combination warp and filling ring spinning frames, 80 spindles each, designed for spinning fine counts; two Whitin combination warp and filling ring spinning frames, 80 spindles each.

Mules Spinning.—One Mason self-acting spinning mule, 120 spindles, 1¾-inch gauge, with all latest improvements.

Spooling.—Two Draper spoolers 40 spindles each; one Saco & Pettee spooler, 72 spindles; one Barber-Coleman automatic knotter, one Byrd automatic knotter.

Twisting.—One Draper combination wet and dry twister, 48 spindles; two Fales & Jenks wet twisters, combination filling and taper top wind; 70 spindles each.

Winding.—One universal cone and tube winder.

Reeling.—One D. A. Tompkins adjustable reel, 50 spindles; one Draper 54-inch reel, 50 spindles.

Miscellaneous Equipment.—Fairbanks scales; model of Daly's differential motion (complete); models of Campbell's ball bearing rolls; Brown & Sharpe roving reel; Brown & Sharpe yarn reel; Brown & Sharpe scales and weights; Charlotte Supply Co's. skein tester; model of "Eagle" cotton gin; Fred B. Howe twist counter.

Division of Weaving and Designing

The equipment of this division is as follows:

Winding.—One W. W. Altemus & Son bobbin winder; one Atwood-Morrison Company bobbin winder; one Geo. W. Payne & Company skein winder.

Dressing.—One Davis & Furber dresser; one Davis & Furber jack spooler.

Warping.—One Draper section warper; one Draper ball warper.

Beaming.—One Entwistle beaming machine.

Jacquard Card Cutting.—One John Royle, French index, foot-power card-cutter.

Hand Looms.—Seventeen 15-inch hand looms with 4x4 box motions and 30 harnesses shedding engines, arranged for four beam work.

Power Looms.—One 40-inch Northup loom fitted with 16-harness Stafford dobby; one 28-inch Northop loom with steel harness warp stop motion; one 36-inch Mason Gingham loom with 4x1 box motion; one Mason 44-inch loom with Stafford 20-harness dobby; one Mason 40-inch cam loom, arranged for 2, 3, 4 and 5 harnesses; one Stafford 30-inch fancy cotton loom with 20-harness dobby and leno attachment; one Stafford 30-inch loom with Halton 624-hook, double life, single cylinder jacquard; one Crompton & Knowles 40-inch "Gem" loom, with 30-harness dobby and 4x4 box motion; one Crompton & Knowles 26-inch fancy towel loom with 16-harness dobby and 3x1 box motion; one Crompton & Knowles 64-inch loom, 4x1 box motion, fitted with 624-hook, double lift, single cylinder jacquard, tied for weaving damask; one Whitin 40-inch cam loom arranged for 2, 3, 4 and 5 harnesses; one Whitin 40-inch fancy cotton loom with 20 harness dobby; one Whitin heavy pattern duck loom; one Crompton & Knowles 30-inch fancy cotton loom with 16-harness dobby and 2x2 box motion; two Kilburn & Lincoln 38-inch cam looms; one Knowles 30-inch loom with 416-hook, single lift, swing cylinder jacquard tied for weaving napkins; one 28-inch "E" model Draper loom with steel harness stop motion; one 28-inch "E" model Draper loom with two thread warp stop motion; one 28-inch "E" model Draper loom with Lacy top rig and tape selvage motion, arranged for 2, 3, 4 and 5 harness work; one 28-inch "K" model Draper loom with 20-harness dobby, double filling fork and feeler, arranged for two beam work; one Crompton & Knowles 4-bank, 4-shuttle ribbon loom, mounted with 416 hook double lift jacquard.

Division of Textile Chemistry and Dyeing

The work in textile chemistry and dyeing is carried on in an experimental laboratory and a practical dyehouse. These are equipped with the necessary apparatus and chemicals for instruction in organic chemistry, scouring, bleaching, dyeing, mercerizing, printing, etc.

The experimental laboratory is fitted with appropriate work-tables, furnishing accomodations for 64 students, working by detachments. Each table is supplied with the necessary arrangements for gas and water, and drawers and lockers in which may be stored apparatus and unfinished experiments.

The Dye House contains nine dye vats, four fitted with copper heating coils, one for peroxide bleaching; one Schaum & Uhlinger self-balancing hydro-extractor; one model Vacuum dyeing machine with steam engine attached; one Birch sample dyeing machine with electric motor attached; one calico printing machine; one mercerizing machine for yarn; one steaming and ageing box; one Butterworth jigger; three jacketed copper kettles.

Department Library

For the use of students and instructors, a reading room in the Textile building has been fitted up and is furnished with some of the more important books of reference relating to the textile industry, and also with the leading periodicals relating to the subject. All journals and periodicals are contributed. There is also in this room an exhibit of the work done by the students in the different divisions of the department, and an equipment of old machinery, illustrating the methods used before the introduction of power machinery. The room is open every week-day throughout the session.

The Printery

The printery equipment is as follows: One Babcock regular drum cylinder printing press, 22 by 27 inch bed; two Chandler & Price job presses; one Chandler & Price cutter; one Morrison stitcher; two perforators; one letter folder; two Hammond cabinets; two imposing stones; one No. 1 model linotype machine with supply of matrices for same; a supply of type, furniture, etc. All the machines are driven by individual motors. The college reports, bulletins and miscellaneous stationery are printed here, much of the work being done by students.

Gymnasium

A large room in the basement of the Agricultural Hall has been set aside by the Board of Trustees for a gymnasium. The room is equipped with carefully selected apparatus including horizontal bars, parallel bars, spring boards, traveling rings, flying rings, climbing rope, horse, buck, low parallels, trapezes, pulleys, weights, floor mats and take-off board.

The gymnasium is to give year-round training to those students interested in athletics, so that they will keep in good condition for work on the athletic teams. It is also designed for students who do not take other forms of exercise, but depend on the gymnasium for their only means of physical development. The work is not required but is enjoyed by a large number of students. A member of the faculty superintends the work and directs the exercises.

Museum

On the first floor of the Agricultural Hall is the Museum of Natural History. It is furnished with large cases containing the collections of the geologist, the entomologist, the botanist, the agriculturist, the agronomist, and the horticulturist. These exhibits are of especial interest to people of the State because they embrace the minerals and rocks of South Carolina; birds of South Carolina; insects common to the State, especially those injurious to vegetable life; fungus diseases of plants; and grains and fruits of the State. There are also objects of historical interest on account of their association with John C. Calhoun and Thomas G. Clemson.

Hospital

The Hospital, located about a quarter of a mile from the barracks, is a wooden building, especially designed for the purpose. It is lighted by electricity, and has a thorough sewerage system. The hospital is in the immediate charge of the surgeon, who is assisted by an experienced matron and nurses, thus insuring the best personal attention to each patient.

Laundry

The Laundry is a brick building especially constructed and fitted with the improved machinery of a modern steam laundry, and is operated exclusively for the students.

Library

In the main building is a series of rooms especially constructed for the use of the library. There are now upon the shelves 10,788 volumes, classified under the various heads of literature, history, biography, science and reference books. In addition to these in the general library, there are 1,493 volumes in the Experiment Station and department libraries of the College. There are also about 5,700 government publications and 200 reference books, together with about 9,000 pamphlets. The library is supported by an annual appropriation, and the number of books is added to each year.

In connection with the library there is a reading room in which the students have access to 35 of the leading monthly periodicals, 14 weekly, the principal daily papers of the State and many of the county papers.

The Clemson Relics

A collection of thirty-seven oil paintings, collected by Mr. Clemson, chiefly in Holland, together with a number of additional portraits, may be seen in the reception room in the main building.

The Calhoun Relics

Several pieces of furniture and other interesting relics, formerly the property of Mr. Calhoun, are carefully preserved in the Calhoun Mansion, where they may be seen by visitors to the College.

Residences and Hotel

The Calhoun Mansion, the former residence of John C. Calhoun, is kept in honor of his memory, in accordance with the provisions of Mr. Clemson's will.

Residences.—Ten two-story brick buildings, nine six-room cottages, thirty-five smaller houses, all situated on the campus, furnish residences for professors and other officers of the College.

Clemson Club Hotel.—The College Hotel, a frame building with two eight-room annexes, situated on a hill overlooking the campus, is operated by several members of the Faculty. In addition to furnishing a home for the members of the club, it is open the entire year to a limited number of transients.

COLLEGE INSTITUTIONS

Religious Exercises

Chapel Services.—There is preaching every Sunday morning by ministers of the different denominations, and chapel services are conducted every morning by a resident minister or a member of the faculty. All students are required to attend these exercises unless specially excused.

Students must attend the churches of which they are members, or with which they have been affiliated at home. However, special permission can be obtained for any particular Sunday to attend elsewhere.

Sunday School.—A Sunday school at which attendance is voluntary, also meets every Sunday morning, and students are encouraged and urged to attend.

Young Men's Christian Association

The College Young Men's Christian Association is fundamentally a Christian organization, with four great objects, which are as follows: To lead students to become disciples of Jesus Christ as their divine Lord and Saviour; to lead them to join the Church; to promote growth in Christian faith and character, and to enlist and train them in Christian service.

At Clemson the association has supervision and direction of all the religious activities of the College except the Sunday school, the Sunday morning services, and the daily chapel exercise. The activities include; a religious service on Sunday evening, a mid-week prayer-meeting on Wednesday evening, daily prayer service just after breakfast, and a series of special evangelistic meetings from time to time. In November the Week of Prayer is appropriately observed conjointly with the college men of America.

Last year 437 students applied for membership in the Y. M. C. A.; and 75 per cent. of this number were enrolled as members.

The Bible department offers three courses of study; one on the life of Christ; one on the life of St. Paul; and one in the Old Testament. These classes meet on Sunday evening and are led by students, who are prepared for this work through training classes led by members of the faculty, the local ministers and the general secretary. During the past year 393 cadets were enrolled in 28 of these group classes. This department also conducts Bible institutes and special training conferences. A week's series of Bible lectures, delivered by some recognized Biblical scholar, does much to stimulate study and research in the Christian religion.

The department of missions has general supervison of all the missionary activities of the College, and, like the Bible department, is pursuing a broad educational policy. The conditions and needs of the non-Christian world, and how these conditions are being improved and the needs supplied, are brought to the attention of the students through addresses, literature, and study classes. A small but select library is kept in the office of the general secretary, where it is always accessible to the members.

This year the Association is uniting with two other College Associations in the support of a Missionary, Mr. E. B. Barnett, in the Foreign field.

The property of the association, the significance of membership, the social activities, the summer conferences, and the rules for the use of the tennis courts and game-rooms, cannot be given in detail here.

In order to prosecute this work intelligently it has been found necessary and desirable to maintain a secretary, who has general supervision of all the work of the organization. This secretary has no official connection with the College, either as a disciplinarian or instructor; neither is he a College preacher. He is an older and more experienced student, employed by the students as their counsellor, their advisor, and the director of their religious work.

All students should know the secretary personally, for his unique position enables him to be of service to students in many ways. Owing to the change which has been made in the location of the Y. M. C. A. quarters, the Secretary will now be found in one of the rooms in the new story of barracks No. 1. Students are welcome to his room at all times; and he is there for their convenience.

Parents and students desiring further information should write to the General Secretary, R. L. Sweeney, at the College.

Care of the Sick

The Surgeon is one of the regular officers of the College, and his special duty is to look after the health of the students. He also has charge of the hospital, and supervises all matters pertaining to the sanitation of barracks.

At a regular appointed time every day, students who so desire may consult the Surgeon, and those who are sick are cared for by experienced nurses in the College Hospital. In case of necessity students are allowed to consult the Surgeon at any time, or send for him, as may be required.

The Surgeon cannot undertake to notify parents every time a student reports to the hospital for medicine, or for rest on account of some slight complaint. However, they may rest assured that they will be promptly notified of sickness of any consequence. In case of serious illness the Surgeon will telegraph them.

Student Labor

The College assumes no obligation to furnish employment to students for wages. Considerable manual labor, however, is necessary to carry on the various departments of the College; and when practicable, students are employed in this work. The number applying for work always exceeds the number that can be employed, and those who enter College late in the session are at a special disadvantage in securing work.

No student is allowed to undertake work that interferes with his College course.

Literary Societies

Three literary societies, the Calhoun, the Columbian, and the Palmetto, furnish a valuable supplement to the work of the College. These societies afford facilities for practice in debate, oratory, declamation and essay writing, and their members acquire valuable knowledge of parliamentary law and usage. The meetings are held weekly, on Friday evenings. An annual contest is also held by each society, at which there are debates, orations and declamations by the students.

On these occasions a representative is chosen from each society to enter the contest for the Trustees' Medal at commencement. The societies themselves also award medals annually to the best debater, orator, and declaimer.

The societies occupy halls in the main College building, which are furnished with carpets and opera chairs, and are maintained entirely by the students. A small initiation fee is charged, and small monthly dues to meet running expenses. All students are advised to join one of these societies.

State Oratorical Contest

The literary societies also send a representative to the annual contests of the South Carolina Intercollegiate Oratorical Association, which includes the following institutions: Furman Uuniversity, Wofford College, Clemson Agricultural College, Presbyterian College of South Carolina, Erskine College, Newberry College, South Carolina Military Academy, and University of South Carolina.

Publications by the Students

The Clemson College Chronicle, a monthly magazine designed to encourage literary work among the students, is published jointly by the literary societies during the College session.

An **annual,** an illustrated volume, is published under the auspicies of the senior class.

There is also **The Tiger,** published weekly, which is devoted largely to athletics.

The Science Club

The Clemson College Science Club was organized for the purpose of promoting knowledge of the progress of the natural sciences, theoretical and applied. Public meetings are held every month, at which subjects of general scientific interest are discussed by members of the faculty and others.

The Clemson Biological Club

This club is open to members of all the faculties of Clemson College and to all students. Its object is to stimulate interest in biological subjects, and to keep its members fully abreast of current biological work and thought.

A regular meeting is held once each week in the Agricultural Hall.

Lecture Course

A lecture course, employing some of the best talent on the American platform, is provided every session. These lectures are delivered in Memorial Hall, at a cost to students of one dollar for the course. During the session of 1912-1913 the following lectures and concerts were given:

(1) Ben Greet Players.
(2) Redpath Quartette.
(3) Gamble Concert Company.
(4) Byron Piatt.
(5) Bergen Marx Company.
(6) Dr. Edward Amherst Ott.
(7) Reed Miller and Frank Croxton.
(8) Phidelah Rice.
(9) Prof. Vladimir Karapetoff.
(10) Dr. James P. Smith.
(11) The Collegians.

The Cadet Exchange

The College maintains a book and supply store known as the Cadet Exchange, where students may purchase text-books, drawing instruments and other student supplies at reduced prices.

College Athletics

It is the policy of the College to sanction and encourage athletics so long as they do not interfere with studies and other duties. Football, baseball and track are the most popular sports, and it is assumed that parents are willing for their sons to participate in these games unless the President is definitely notified to the contrary. The athletic teams are permitted to take a few trips each season, usually on Saturday, to play intercollegiate games. The College is a member of the Southern Intercollegiate Athletic Association (S. I. A. A.,) and of the South Carolina Intercollegiate Athletic Association (S. C. I. A. A.)

Athletic Council.—The Southern Intercollegiate Athletic Association has placed the athletic interests at each college under the supervision of an athletic Council, consisting of members of the Faculty and the student body. This council consists of nine members—two members of the Faculty, the president and the secretary-treasurer of the local athletic association, elected by the students, and three members of the Faculty chosen by the Faculty, and the four class presidents.

Intercollegiate Athletics.—For the regulation of intercollegiate athletics, the Faculty has adopted the following rules:

1. **Monthly Standing.**—Any student who fails on more than two subjects during a collegiate month shall not be allowed to participate in match games during the ensuing month. If, by reason of absence or other cause, a grade on the month's work is lacking, the instructor shall give a temporary grade based upon the work done, and this temporary grade shall be used in determining the student's athletic standing until the regular grade is available.

2. **Sessional Standing.**—No student who is found to be deficient in more than one subject for a term shall be allowed to play in any match game during the college year. Change from one course to another, or from a regular to an irregular or special course, shall not interfere with the operation of this rule.

3. **Student Taking Class Over.**—(a) That a student taking a class over be not allowed to play football who has any monthly failure in any subject.

(b) A student taking a class over shall not be allowed to play baseball unless he passes in the first and second terms without any failures and is otherwise eligible.

4. **Graduate Students.**—No graduate student shall participate in any match game unless he is taking at least twenty hours per week of graduate work; that is, work of a higher grade than is given in the regular College courses. Such student shall also conform to the rules of class standing as set forth in Sections 1 and 2. Further, no graduate student of more than one year's standing shall participate in any match game.

5. **Irregular or Special Student.**—No irregular or special student shall be allowed to represent the College in any match game unless taking at least twenty-four hours' work per week, of which not less than twelve hours shall be "theoretical" work.

6. No football player who leaves College before the end of the first term, except for reasons satisfactory to the Faculty Athletic Committee, shall be allowed to participate in match games during the next three College terms.

7. It shall be the duty of the Faculty Athletic Committee to see that the foregoing rules and regulations are strictly enforced.

8. No team shall be allowed to leave the College grounds to participate in any match game unless accompanied by a member of the Faculty, who shall be responsible to the Faculty for the conduct of the players and coaches while away from the College. Such representative shall be appointed by the chairman of the Faculty Athletic Committee, and his expenses shall be included in the expenses of the trip.

THE SOUTH CAROLINA AGRICULTURAL EXPERIMENT STATION

The Agricultural Experiment Station of South Carolina is a department of Clemson College. The organization of the station together with the officers of the staff is given on page 12 of this catalog. The experiment station at present consists of the main station which is located at Clemson and two sub-stations, one in the coast region located at Summerville and one in the Pee Dee section located at Florence. The main offices and laboratories of the station occupy the second floor of the Agricultural Hall, while the station experimental farm, consisting of about 200 acres is located east of and adjoining the College campus. The investigations dealing with the fundamental principles of agricultural sciences and with the application of such principles to practical agricultural operations are carried on in the laboratories and on the experiment station farm at Clemson. The experiments looking to the adaptation of such scientific data accumlated here and elsewhere to the conditions peculiar to certain sections of the State are carried on at the sub-stations and at branch laboratories established in certain sections of the State for this purpose.

It is the aim of the experiment station to carry on research work on problems which have a direct practical bearing on the agriculture of the State. With this end in view elaborate experiments relative to the best methods of procedure under various conditions with the principal plants and animals have been undertaken. As progress is made with such experiments the results obtained are given out to farmers in the form of bulletins, circulars and personal letters. Since the establishment of the Station 171 such bulletins have been published and sent free to every farmer in the State who desires them.

Aside from the research work and the publication of results obtained from such research the experiment station performs various other duties. Among these might be mentioned the entomological and pathological inspection work which aims to protect the farms, orchards and gardens of the State against the introduction of injurious insects and diseases; the biological and soil survey of the State; and the co-operative experimental work carried on with hundreds of farmers in the State. The technically trained experts of the station staff are regarded as authority on their several specialties and they are constantly giving out information relating to the various lines of agricultural endeavor. More than fourteen thousand personal and circular letters are written annually to residents of the State giving technical information to individuals on special subjects. The station staff also aids in disseminating agricultural knowledge by co-operating with the extension division of the College in holding farmers institutes and by meeting with the farm demonstration agents and giving to them technical information which they in turn carry through the demonstration work direct to the farmers.

Close co-operation is maintained with the various research bureaus of the National Department of Agriculture and with the departments of the College. The laboratories are always open to the inspection of the students and other people of the State. The same is true of the experiment station farm. There is always opportunity for a limited number of students to secure work in the various divisions of the station and to assist in the research work carried on by the members of the station staff.

All publications of the experiment station are sent free upon request to any resident of the State. Requests for these should be addressed to J. N. Harper, Director, Clemson College, S. C.

PUBLIC SERVICE

In addition to the usual teaching work, Clemson College expends over $100,000 annually for public service along the following lines:

Fertilizer Inspection and Analysis—

The work of fertilizer inspection and analysis is under the supervision of the Board of Control consisting of Hon. W. D. Evans of Cheraw, S. C., Chairman; Richard I. Manning of Sumter, and S. T. McKeown of Cornwell. The work of inspection is under the immediate supervision of H. M. Stackhouse, Secretary of the Board of Control.

For purposes of inspection, the State is divided into fourteen districts, each with one inspector and a Chief Inspector, W. B. West, to supervise the field work.

The work of analysis is carried on by the special corps of expert chemists attached to the Chemical Department, and under the supervision and direction of Dr. R. N. Brackett, Chief Chemist.

The annual cost of this inspection and analysis is about $35,000.

Agricultural and Textile Scholarships—

The College has maintained 168 four year Agricultural and Textile scholarships, and since last fall, fifty-one one year Agricultural scholarships. Each scholarship is worth $100 and free tuition. The cost of these scholarships is paid out of the fertilizer tax,—as the State makes no appropriation therefor.

The annual cost of these scholarships, including advertising, expense of holding examinations, etc., will be about $23,000.

Veterinary Inspection and Tick Eradication—

This interest is under the supervision of a Committee of the Board of Trustees composed of Hon. W. D. Evans of Cheraw, S. C., Chairman; Hon. E. T. Hughes of Marion, and Dr. R. H. Timmerman of Batesburg.

The work is carried on by the Veterinary Division of the

Agricultural Department. Dr. M. R. Powers, head of the Division, is State Veterinarian. The work includes the control of contagious diseases, eradication of the cattle tick, which transmits Texas fever, and the supervision of shipments of live stock into the State. Much of this work is required by legislative enactment, but the cost comes out of the regular income of the College, and amounts to nearly $16,000 a year.

Entomological and Pathological Inspection—

This work is carried on under the direction of the State Crop Pest Commission, having the same personnel as the Veterinary Committee, of which Hon. W. D. Evans of Cheraw is the Chairman. This Commission is selected by the Board of Trustees from its members.

The State Entomologist is Prof. A. F. Conradi, head of the Division of Entomology, and the State Pathologist is Prof. H. W. Barre, head of the Division of Botany and Forestry.

The work of these officers consists in the control of contagious plant diseases and insect pests. The State Entomologist has also supervision of all nursery stock sold within the State.

The cost of these lines of work is approximately $3,200.

Division of Extension Work and Farmers' Institutes—

This Division, together with the Farmers' Co-operative Demonstration Work conducted jointly by the U. S. Department of Agriculture and the College, is under the supervision of Prof. W. W. Long.

The Extension Work includes farmers' institutes, demonstration trains, correspondence courses, press bulletins, spraying and orchard demonstration, etc.

The College expends for Extension Work between ten and twelve thousand dollars a year.

Farmers' Co-operative Demonstration Work—

As above stated, this work is carried on as part of the work of the Extension Division. The State is divided into three districts, each presided over by a District Agent, and in practically every county there is a local agent who looks after the crop demonstrations. Under the direction of the local agents, farmers are induced to plant certain acreage and cultivate in accordance with expert directions.

The local agents also assist the College in its various other lines of public service.

The College contributes $10,000 annually to carrying on the demonstration work in South Carolina.

The Boys' Corn Club Work—

The Boys' Corn Club Work is also carried on jointly by the U. S. Department of Agriculture, and the College, as a feature of the demonstration work. Prof. W. W. Long is in charge of this particular line of work.

About $1,500 per year is expended by the College in this work.

Co-operative Experimental Work—

The Co-operative Experimental Work is carried on under the supervision of Prof. J. N. Harper, Director of the Agricultural Department and Experiment Station. About 200 farmers are enrolled in this important line, which includes a repetition of many of the experiments conducted at the parent Experiment Station located at the College. The demonstration work seeks to apply known and thoroughly tried and approved methods to farming, but the co-operative experimental work is intended to verify new facts and laws under the various soil and climate conditions in South Carolina.

The cost of conducting this work is approximately $1,000 per annum.

Branch Experiment Stations—

In order to re-inforce the main Experiment Station located at the College, two additional branch stations have already been established, one at Drainage in the costal plain, and another near Florence in the Pee Dee section. One other will be located in the Sand Hill section of the State.

These stations are devoted primarily to experimental work. They will also form centers of dissemination for the information which the College has to give to the people. The College expended $20,000 in the purchase of land for the Pee Dee Station and expends $10,000 annually for its maintenance. The coast Station is practically self-supporting, $2300 having been expended there the past year.

Miscellaneous—

In addition to the above regular lines of activity, the College manufactures at cost the South Carolina flag in a number of different sizes, makes annually an exhibit at the State Fair at a cost of approximately $1,000, and expends a small amount for Textile instruction in some of the neighboring mill villages.

ALUMNI ORGANIZATION

Clemson College Alumni Association

D. H. HENRY, '98, President.
B. H. RAWL, '00, First Vice-President.
R. E. LEE, '96, Second Vice-President.
T. E. KEITT, '06, Third Vice-President.
H. W. BARRE, '05, Secretary.
J. E. HUNTER, '96, Treasurer.
J. H. MOORE, '96, Alumni Orator of 1913.

There are Alumni Chapters in each of the following cities:—

New York, N. Y.
Pittsburgh, Pa.
Washington, D. C.
Schenectady, N. Y.
Greenville, S. C.
Charleston, S. C.
Rock Hill, S. C.
Pittsfield, Mass.
Atlanta, Ga.
Columbia, S. C.

Register of Graduates

A Register of Graduates has recently been published as a separate bulletin, and will be revised from time to time. Graduates and friends of the institution are requested to cooperate in keeping this record as nearly accurate as possible. The following is the information desired; name, address, year of graduation, and occupation. This should be sent to the Secretary of the Clemson College Alumni Association.

GRADUATES 1911-1912

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
s Adams, H. A. Jr. Text.	Edgefield	Meriwether
Adams, T. C. Text.	York	Rock Hill
s Ancrum, J. N. Agri. III	Kershaw	Camden
Anderson, H. W. Text.	Colleton	Walterboro
Bacot, B. R. Civil	Charleston	55 Trodd
s Bates J. A. Agri. III	Calhoun	St. Matthews
Bedell, A. S. IV & VI	Greenville	Greenville
Bell, T. E. Agri. II	Lee	Hartsville
Bissell, P. L. IV & VI	Charleston	167 Rutledge Ave.
Blackwell, J. W. Jr. Mech. Elec.	Darlington	Darlington
Brown, A. J. Mech. Elec.	Pickens	Liberty
Byars, G. W. Agri. I	Cherokee	Gaffney
Caldwell, Jno. C. Civil	Spartanburg	Campobello
s Caldwell, R. D. Agri. III	Cherokee	Blacksburg
Connor, S. M. Agri. I	Colleton	Smoaks
s Cooper, M. L. Agri. I	Fairfield	Blythewood
s Covington, H. S. Agri. II	Marlboro	Bennettsville
Crawford, J. R. Civil	Laurens	Clinton.
David, L. S. Civil	Greenville	141 James
Davis, H. S. Mech. Elec.	Charleston	135 Coming St.
Dreher, J. M. Chem. Geol.	Lexington	Irmo
s Evans, T. S., Jr. Agri. I	Chesterfield	Cheraw
s Ezell, J. F. Agri.	Spartanburg	Cherokee
Ezell, W. D. Agri. III	Spartanburg	Cherokee
s Fant, A. P. Agri. I	Anderson	Anderson
s Faris, C. B. Agri. I	York	Fort Mill
Fizer, J. R. Mech. Elec.	Orangeburg	Branchville
s Folk, C. S. Agri. I	Bamberg	Denmark
s Freeman, H. A. Agri. III	Laurens	Honea Path
Gage, J. H. Mech. Elec.	Union	Union
s Galphin, R. W. Agri. I	Orangeburg	Vance
s Gilstrap, L. C. Agri. II	Pickens	Pickens
s Goldfinch, A. K. Text.	Horry	Conway
s Gray, W. R. Agri. I	Laurens	Gray Court
s Hall, C. M. Agri. I	Anderson	Anderson

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s Hall, E. E. Agri. I	Lancaster	Fort Mill
Hamlin, E. E. Civil	Anderson	228 W. Franklin St.
s Hardin, D. T. Agri. II	Abbeville	Lowndesville
s Hardy, G. L. Text.	Edgefield	Johnston
Harris, J. G. Agri. II	Laurens	R. No. 1 Owings
Hartley, J. E. Mech. Elec.	Lexington	Batesburg
s Harvey, H. W. Agri. I	Berkeley	Pinopolis
s Hayden, C. J. Agri. III	Orangeburg	R. No. 2 Cope
s Hayden, J. H. Agri. II	Orangeburg	R. No. 2 Cope
s Hayes, W. H. Agri. I	Spartanburg	R. No. 2, Pacolet
Haynesworth, M. S. Mech. Elec.	Darlington	Darlington
s Hearsey, G. J. Agri. III	Marlboro	Blenheim
Hill, D. B. Mech. Elec.	Bamberg	R. No. 1, Bamberg
Houck, W. A. Agri. II		Lenoir, N. C.
s Hutson, H. M. Agri. III	Aiken	1616 Colleton Ave.
Jennings, H. C. Agri. I	Orangeburg	R. No. 2 Cope
s Jeter, R. M. Agri. III	Richland	R. No. 4, Columbia
Josey, E. P. Agri. II	Darlington	R. No. 4, Lamar
Kaigler, H. O. Civil	Lexington	R. No. 3, Gaston
LaMotte, W. R. Mech. Elec.	Darlington	597 Broad St.
s Lazar, J. T. Agri. I	Barnwell	Allendale
s Latimer, D. L. Text.	Abbeville	Lowndesville
s Lawton, J. G. Agri. III	Hampton	Garnet
Lindler, J. R. W. Civil	Lexington	Gilbert
Littlejohn, E. G. Mech. Elec.	Union	Jonesville
McIntosh, R. J. Mech. Elec.	Richland	1345 Main, Columbia
Hall, R. R. Mech. Elec.	Oconee	Clemson College
Mays, E. D. Agri. I	Greenwood	1120 S. Main
s McCrary, O. F. Agri.	Greenville	Bates St.
Miller, S. A. Text.	Lexington	Columbia
Mitchell, J. E. M. Mech. Elec.	Charleston	Edisto
Owens, B. F. Agri. II	Barnwell	Dunbarton
s Pennell, B. F. Agri. III	Abbeville	Level Land
Perry, W. G. Civil	Greenville	140 James
Petrie, W. C. Mech. Elec.	Spartanburg	Spartanburg
Privette, W. H. Agri. II	Darlington	Darlington
s Prosser, H. T. Agri. I	Williamsburg	Leo
Redfern, T. C. Agri. II	Oconee	Clemson College
s Reid, T. R. Agri. II	Greenville	Campobello
s Risher, F. W. Agri. I	Colleton	Smoaks

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s Risher, T. R., Jr., Agri. III	Colleton	Round
s Rowell, N. K. Agri. I	Marion	Centenary
Ross, F. L. Agri. II	Cherokee	Gaffney
Schroeder, F. E. Civil	Charleston	157 Rutledge Ave.
s Small, A. G. Agri. I	Horry	Galivant's Ferry
Sompayrac, E. A. Mech. Elec.	Darlington	Society Hill
s Stanton, C. H. Agri. III	Marlboro	Clio
Stribling, J. N. Civil	Oconee	Walhalla
Tison, E. W. Mech. Elec.	Hampton	Robertville
s Tompkins, D. Text.	York	Rock Hill
Truesdale, B. J. Mech. Elec.	Kershaw	Kershaw
s Ulmer, R. F. Agri. III	Hampton	Brunson
Wakefield, J. B. Text.	Abbeville	Antreville
s Wessinger, J. H. S. Agri. II	Lexington	Lexington
s Workman, J. M. Text.	Sumter	Mayesville
s Yates, L. F. Text.	Lee	Camden
s Zerbst, G. H. Agri. III	Charleston	70 Pitt St.

NOTE: s—Indicates Scholarship Student

STUDENTS 1912-1913

SENIOR CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Alexander, R. A. Agri. I	Chester	Chester
Anderson, G. M. Agri. II	Abbeville	Antreville
s Auld, I. D. Agri. II	Charleston	Mt. Pleasant
Banks, W. D. Agri. II	Calhoun	St. Matthews
Barnwell, J. W. Jr., Civil	Charleston	48 S. Bay
Berry, M. D. Mech. Elec.	Greenville	Lawton Ave.
Blackmon, L. R. Mech. Elec.	Lancaster	Kershaw
Bomar, H. J. Mech. Elec.	Spartanburg	221 Kennedy
s Bouson, F. W. Agri. III	Charleston	11 Wentworth
s Bowers, W. E. Agri. III	Kershaw	Kershaw
s Boylston, H. G. Agri. II	Barnwell	Elko
Britt, W. B. Mech. Elec.	Abbeville	McCormick
s Brodie, J. E. Agri. III	Aiken	Earle
Brown, S. K. Mech. Elec.	Florence	Hyman
s Cannon, D. L. Agri. III	Spartanburg	283 S. Liberty
Coles, M. Agri. II		Jacksonville, Fla.
s Davis, T. F. Agri. II	Richland	Killian
Dunlap, C. K. Civil	Anderson	Belton, Bx. 163
Erwin, J. O., Jr. Text.	Spartanburg	E. Main
Evans, A. B. Mech. Elec.	Charleston	70 Ashley Ave.
s Evans, A. J., Jr. Civil	Dillon	Dillon
Fant, R. W. Text.	Anderson	River St.
Fitzsimmons, J. C. Civil	Charleston	65 Legare St.
s Frampton, W. H. Agri. III	Charleston	212 Ashley
s Frick, G. E. Text.	Lexington	Chapin
Gentry, T. C. Mech. Elec.	Clarendon	Summerton
Gilmore, W. C. Text.	Union	Santuc
Hagood, H. A. Civil	Spartanburg	N. Church
Hale, P. S. Agri. III	Charleston	Mt. Pleasant
Hall, J. D. Mech. Elec.	Pickens	Central
s Hanahan, J. E. Text.	Charleston	R. No. 1 Johns Island
Harrison, S. E. Text.	Greenville	Simpsonville
s Herbert, W. W. Agri. II	Newberry	Newberry
Heriot, H. A. Mech. Elec.	Lee	Oswego
s Hiers, J. L. Agri. III	Hampton	Hampton

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s Hodges, F. Agri. III	Greenwood	Greenwood
s Hutson, L. D. Agri. III	Aiken	Aiken
Jones, B. M. Mech. Elec.	Newberry	P.O.Bx. 103 Newberry
Kangeter, J. H. Mech. Elec.	Charleston	31 Hasell
Kennerly, H. S. Agri. I	Greenwood	1026 Main St.
s King, C. J. Agri. III	Lancaster	Lancaster
King, J. F. Agri. III	Charleston	108 Wentworth
s Kyser, W. T. Agri. II	Lexington	Lexington
Lachicotte, A. H. Agri. II	Georgetown	Waverley Mills
s Lathrop, F. H. Agri. II	Orangeburg	Orangeburg
Lawton, M. S. Mech. Elec.	Barnwell	Allendale
Magill, J. A. Agri. II	Abbeville	Abbeville
McAlhany, T. D. Civil	Dorchester	St. George
McGee, H. S. Mech. Elec.	Anderson	Honea Path
McIntyre, D. Mech. Elec.	Marion	Marion
s McLeod, W. G. Agri. III	Darlington	Hartsville
s Mellett, F. M. Agri. III	Sumter	Mullins
Morrison, W. E. Mech. Elec.	Chester	Chester
s Meyers, P. E. Agri. II	Berkeley	Cordesville
Newman, W. W. Mech. Elec.	Chesterfield	R. No. 2. McBee
Park, A. D. Mech. Elec.	Fairfield	Winnsboro
s Patrick, C. S. Agri. I	Cherokee	R. No. 2 Gaffney
Pearce, G. H. Agri. I	Edgefield	Johnston
s Pennell, R. E. Text.	Anderson	Belton
s Perrin, J. W. Agri. I	Lee	Bishopville
Provost, E. T. Mech. Elec.		827 E. Ave. York, Nebraska
Rabb, S. W. Text.	Greenville	Greenville
Rivers, H. F. Mech. Elec.	Charleston	Charleston
Robison, R. Text.	Greenville	Greers
s Seal, J. L. Agri. I	Greenwood	Greenwood
Sloan, D. M. Mech. Elec.	Greenville	125 James
Smarr, W. L. Agri. II	York	Sharon
Stokes, C. E. Agri. II	Laurens	Mountville
Stoudemire, C. E. Text.	Lexington	Chapin
Todd, J. N. Civil	Oconee	Seneca
s Turbeville, A. C. Agri. II	Charleston	222 Ashley
s Weeks, T. W. Text.	Aiken	White Pond
Wilson, T. B. Civil	Aiken	Augusta, Ga., R. No. 3
Wolfe, L. F. Civil	Orangeburg	86 E. Amelia
Yeargin, B. F. Agri. I	Laurens	Gray Court
Youmans, C. P. Agri. III	Barnwell	Fairfax

NOTE: s—Indicates Scholarship Student

JUNIOR CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
s Armstrong, G. M. Agri. II	Barnwell	Barnwell
Baker, C. W. Agri. I	Marion	Marion
Banks, D. K. Mech. Elec.	Calhoun	St. Matthews
Barksdale, J. C. Agri. I	Laurens	P. O. Bx. 151, Laurens
Barron, B. P. Civil	York	Yorkville
Berley, J. A. Agri. I	Newberry	Pomaria
Black, F. Mech. Elec.		Pelham, N. Y.
Boozer, H. S. Mech. Elec.	Newberry	1935 Harrington St.
Boyd, A. R. Agri. II	Abbeville	Mt. Carmel
Brawley, W. F. Mech. Elec.	Chester	Chester
Brown, G. H. Mech. Elec.	York	Rock Hill
Bryant, V. F. Civil	Orangeburg	8 Whitman
Byrd, E. M. Mech. Elec.	Darlington	Society Hill
Carson, J. L. Agri. I	Spartanburg	S. Church
Chambliss, H. E. Mech. Elec.		Hardinsburg, Kentucky
Cox, R. E. Agri. I	Abbeville	Abbeville
Crawford, F. P. Mech. Elec.	Saluda	Saluda
Dantzler, F. C. Agri. II	Orangeburg	Holly Hill
Dantzler, M. A. Mech. Elec.	Calhoun	Cameron
DesChamps, C. E. Mech. Elec.	Sumter	Sumter
s Dunlap, J. E. Agri. III	Darlington	Hartsville
Douthit, J. B. Agri. I	Anderson	Pendleton
Edwins, A. L. Mech. Elec.	Orangeburg	Orangeburg
Emerson, C. R. Mech. Elec.	Greenwood	Hodges
Erwin, J. W. Text.	Spartanburg	E. Main
Ezell, R. B. Agri. I	Spartanburg	Forest St.
Fletcher, J. E. Mech. Elec.	Marlboro	McColl
Gandy, A. P. Agri. I	Darlington	Dovesville
Gilmore, E. R. Agri. III	Union	Santuc
s Haddon, T. C. Agri. II	Greenwood	Hodges
Haight, A. B. Mech. Elec.	Charleston	160 Calhoun
Hanvey, E. Agri. II	Abbeville	Troy
Harris, T. G. Agri. I	Laurens	R. No. 1, Owings
Harrison, J. F. Agri. I	Spartanburg	Moore
Hood, R. S. Mech. Elec.	Sumter	Sumter
Hunter, M. W. Mech. Elec.	Pickens	Liberty

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Hydrick, D. E. Mech. Elec.	Spartanburg	E. Lee.
Jackson, A. H. Text.	Abbeville	Abbeville
s Jackson, B. M. Agri. II	Sumter	Hagood
Jackson, R. Text.	Spartanburg	Wellford
James, B. M. Civil	Greenville	402 E. Washington
s Jenkins, R. F. Agri. II	Richland	Columbia 819 Woodrow
Jervey, F. J. Mech. Elec.	Charleston	71 Rutledge
s Johnston, F. S. Agri. III	Florence	Florence
Kennedy, R. G. Mech. Elec.	Orangeburg	Orangeburg
Kilgo, P. R. Mech. Elec.	Florence	Florence
Lachicotte, W. F. Mech. Elec.	Georgetown	Waverley Mills
Lever, B. R. Text.	Lexington	Chapin
Lewis, A. P. Agri. I	Oconee	Clemson College
Massey, L. H. Mech. Elec.	York	R. No. 3, Ft. Mill
s McBride, J. N. Agri. I	Florence	Florence
McDonald, F. H. Mech. Elec.	Charleston	38 Henrietta
McDonald, J. W. Mech. Elec.	Edgefield	Parksville
s McIntosh, J. M. Agri. III	Richland	Columbia 1631 Richland
McLure, J. W. Civil	Union	Union
s McMillan, G. F. Text.	Bamberg	Ehrhardt
Morgan, G. R. Mech. Elec.	Greenville	305 E. North St.
Oetzel, J. G. Mech. Elec.	Union	Union
Opt, R. A. Text.	Anderson	R. No. 3, Belton
s Parker, H. L. Agri. I	Spartanburg	Roebuck
Pearlstine, L. C. Civil	Calhoun	St. Matthews
Perry, W. L. Mech. Elec.	Richland	Columbia 1518 Wasn'ton.
s Pressley, E. H. Agri. I	Chester	Chester
s Reeves, W. A. Agri. II	Fairfield	Longtown
Rice, W. H. Agri. III	Bamberg	Denmark
s Ridgell, R. H. Agri. III	Clarendon	Manning
s Rogers, T. B. Mech. Elec.	Williamsburg	Vox
s Salter, F. P. Agri. III	Edgefield	Trenton
Schilletter, A. E. Agri. I	Oconee	Clemson College
Schilletter, W. A. Agr. I	Oconee	Clemson College
Smith H. L. Text.	Anderson	1804 S. Main
s Sprott, W. T. P. Agri. III	Clarendon	Foreston
Stanford, A. G. Mech. Elec.	Charleston	25 Montague
Stender, H. R. Agri. III	Charleston	54 Hasell
Thornton, C. C. Mech. Elec.	Laurens	Mountville
Thornhill, T. W. Mech. Elec.	Dorchester	Summerville

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Tinsley, D. D. Mech. Elec.	Spartanburg	White Stone
Todd, J. R. Agri. I	Abbeville	Due West
Todd, J. G. Civil	Oconee	Seneca
Usher, A. B. Agri. II	Marlboro	R. 2, Gibson, N. C.
Ward, A. H. Agri. I	Florence	Timmonsville
Ward, J. Mech. Elec.	Georgetown	614 Prince
Wells, J. H. S. Agri. III	Spartanburg	Clifton
Wilkerson, W. B. Agri. I	York	Hickory Grove
s Willis, J. W. Agri. I	Saluda	Saluda
Wingo, R. H. Mech. Elec.	Spartanburg	N. Church
Witherspoon, J. T. Agri. II	Clarendon	Mayesville
s Woodward, J. T. Agri. III	Aiken	Aiken
Wood, W. D. Agri. I	Greenville	Greer

SOPHOMORE CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Acker, E. G. Agri.	Anderson	1039 S. Main
Adams, H. M. Eng.	Edgefield	Meriwether
s Arthur, W. D. Agri.	Union	Union
s Arthur, W. H. Agri.	Union	Union
Atkinson, G. P. Eng.	Florence	Timmonsville
s Barker, H. D. Agri.	Oconee	Tamassee
s Barnett, D. E. Agri.	Laurens	Laurens
Barnes, F. S. Eng.	York	Rock Hill
Barnett, M. S. Eng.	York	Clover
Barnwell, F. H. Eng.	Charleston	Adams Run
Baxter, C. L. Eng.	Hampton	Garnet
Bell, St. J. E. Eng.	Charleston	12 Orange
Benjamin, R. N. Eng.	Greenwood	Greenwood
Bennett, C. G. Eng.	Lancaster	Lancaster
Berley, G. E. Eng.	Newberry	Pomaria
Beymer, O. H. Eng.	Spartanburg	Elford Terrace
Bigby, W. A. Eng.	Anderson	Williamston
Boggs, L. A. Eng.	Pickens	Liberty
Bomar, W. M. Eng.	Spartanburg	Kennedy St.
Boone, T. E. Agri.	Orangeburg	Rowesville
s Bostick, B. Agri.	Beaufort	Beaufort

NOTE: s—Indicates Scholarship Student

	Name and Course	County	Residence
	Bowman, J. S. Eng.	Orangeburg	Rowesville
	Bowman, W. L. Eng.	Abbeville	Lowndesville
	Briggs, G. R. Agri.	Greenwood	Greenwood
	Bristol, H. W. Eng.	Beaufort	Washington St.
	Bunker, F. L. Eng.	Pickens	Easley
	Buyck, D. D. Eng.	Calhoun	St. Matthews
	Byars, E. H. Agri.	Marion	Marion
	Byers, J. L. Eng.	Orangeburg	Orangeburg
	Campsen, G. E. Eng.	Charleston	2 Glebe St.
s	Cannon, J. C. Agri.	Greenville	Simpsonville
	Carmichael, J. H. Eng.	Edgefield	Edgefield
	Cathcart, T. M.. Agri.	Fairfield	Winnsboro
	Caughman, K. G. Eng.	Richland	Columbia, 1013 Sumter
	Caughman, W. W. Agri.	Lexington	Lexington
	Causey, R. G. Agri.	Berkeley	Pinopolis
	Chaplin, H. L. Agri.	Orangeburg	Neeses
	Chapman, H. M. Eng.	Pickens	Liberty
	Chapman, H. R. Eng.	Pickens	Liberty
	Chapman, R. C. Agri.	Greenville	Pelzer
	Clark, J. R. Agri.	Lexington	Chapin
s	Connor, F. M. Agri.	Colleton	Smoaks
s	Corbett, V. P. Agri.	Sumter	Horatio
	Cork, W. N. Agri.	York	Rock Hill
	Crayton, P. C. Eng.	Anderson	Anderson
s	Creecy, P. J. Agri.	Clarendon	Manning
s	Crouch, A. M. Agri.	Marlboro	Kollock
	Crum, H. M. Agri.	Bamberg	Denmark
	Culvern, F. M. Eng.	Lancaster	Kershaw
	Cureton, R. B. Eng.	Greenville	Greenville
	Darby, J. T. Agri.	Richland,	Eastover
s	Davis, W. O. Agri.	Georgetown	Georgetown
	Dicks, W. H. Eng.	Barnwell	Dunbarton
	Drakeford, J. M. Arch.	York	Yorkville
s	Dukes, H. H. Agri.	Dorchester	St. George
	DuVernet, E. P. Eng.	Greenville	R. No. 1 Greenville
	Dwight, P. M. Eng.	Sumter	R. No. 1, Wedgefield
	Edmonds, M. Eng.	Richland	R. No. 1 Columbia
	Epps, W. C. Eng.	York	Fort Mill
s	Evans, D. W. Agri.	Calhoun	Cameron
s	Faris, M. A. Agri.	York	Fort Mill
s	Finch, W. H. Agri.	Chester	Fort Lawn

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Fincken, J. A. Eng.	Cherokee	Gaffney
s Folk, C. E. Text.	Newberry	Pomaria
Foster, J. C. Eng.	Spartanburg	White Stone
Foxworth, G. D. Agri.	Marion	Marion
Frazier, A. D. Eng.		Atlanta, Ga., 342 Gordon St.
Gaines, M. W. Agri.	Greenwood	Greenwood
s Garris, E. W. Agri.	Colleton	Round
Gee, C. F. Eng.	Richland	R. No. 3 Columbia
Hamilton, B. L. Eng.	Oconee	Seneca
Harris, G. G. Eng.	Anderson	Belton
Harty, C. H. Arch.	Spartanburg	263 S. Church
s Harris, G. L. Agri.	Oconee	Westminster
Harvey, W. B. Agri.	Hampton	Hampton
Hester, P. H. Eng.	Pickens	Liberty
Hill, B. F. Agri.	Bamberg	Bamberg
s Hoffman, G. P. Agri.	Fairfield	Blythewood
s Hopkins, D. R. Agri.	Greenville	Fountain Inn
s Hough, T. C. Agri.	Spartanburg	Landrum
Hubster, E. L. Eng.	Colleton	Walterboro
s Hunter, W. J. Text.	Pickens	Liberty
s Hutchings, J. M. Agri.	Pickens	Pickens
Hutto, S. W. Agri.	Orangeburg	Vance
Iler, C. B. Eng.	Greenville	Greenville
Jeffords, S. E. Agri.	Florence	Timmonsville
Jeffords. T. E. Arch.	Darlington	250 Broad
Jenkins, W. L. Eng.	York	Rock Hill
Jennings, T. A. Agri.	Orangeburg	Cope
Jeter, W. R. Agri.	Union	Carlisle
John, D. M. Eng.	Marlboro	Bennettsville
Johnson, R. H. Agri.	Union	Mt. Tabor
s Johnston, R. B. Agri.	Chester	Chester
Jones, J. D. Eng.	Sumter	R. No. 3 Sumter
Jones, T. M. Eng.	Richland,	Columbia, 1431 Pendleton
Justus, F. B. Eng.	York	Hickory Grove
Kaminer, J. E. Agri.	Lexington	R. No. 2 Lexington
Keith, W. C. Agri.	Newberry	Chappels
Kendrick, J. W. Eng.	Cherokee	Gaffney
Kittles. E. G. Eng.	Hampton	Brighton
s Lachicotte, E. S. Text.	Georgetown	Waverley Mills
s Lawhon, G. J. Agri.	Florence	Timmonsville
Lawson, C. S. Chem.	Spartanburg	231 Spring

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s LeGette, F. C. Agri.	Marion	R. No. 7 Centenary
LeGrand, L. Eng.	Sumter	207 N. Main
Ligon, P. B. Text.	Anderson	620 Whitner
s Logan, J. R. Agri.	York	Yorkville
Lunney, G. W. Eng.	Darlington	Darlington
s Magill, W. K. Agri.	Abbeville	Abbeville
Marchant, J. L. Eng.	Greenville	Greer
Martin, G. D. Agri.	Spartanburg	Cowpens
Martin, R. F. Arch.	Anderson	R. No. 1, Williamston
Martin, S. J. Agri.	Anderson	R. No. 4, Anderson
Masters, M. K. Agri.	Anderson	R. No. 6, Anderson
McBain, J. M. Arch.	Spartanburg	Pacolet
McCall, P. L. Eng.	Darlington	R. No. 2, Society Hill
McConnell, H. S. Agri.	Anderson	R. No. 1, Anderson
s McCullough, J. Text.	Williamsburg	Benson
McEachern, D. H. Agri.	Dillon	Hamer
McKeown, H. S. Agri.	Chester	Cornwell
McMahan, E. O. Agri.	Oconee	Richland
McMillan, W. L. Agri.	Abbeville	Abbeville
Miles, F. A. Text.	Charleston	69 Hasell
s Miley, J. Agri.	Hampton	R. No. 1, Brunson
Mitchell, B. S. Agri.	Anderson	Honea Path
Monroe, J. B. Agri.	Marion	Marion
s Moore, G. F. Agri.	Florence	Mars Bluff
Moore, J. S. Agri.	Anderson	149 Marie
s Muldrow, H. W. Agri.	Darlington	Darlington
Murph, C. R. Agri.	Spartanburg	White Stone
s Murray, J. J. Agri.	Dorchester	St. George
Nettles, H. J. Agri.	Darlington	Hartsville
Newton, J. L. Agri.	Anderson	Pendleton
Norris, J. E. Agri.	Orangeburg	Vance
s Osborne, F. Agri.	Spartanburg	150 W. Main
s Pate, E. H. Agri.	Lee	R. No. 5, Bishopville
Patterson, J. A. Eng.	Barnwell	Allendale
Peeples, J. Eng.	Charleston	Meggetts
s Poore, R. D. Agri.	Anderson	Belton
Porter, J. H. Agri.	Georgetown	316 Scriven
s Ragsdale, W. G. Text.	Fairfield	Winnsboro
Rice, C. A. Arch.	Richland	1319 Heidt St.. Columbia
s Richards, J. P. Eng.	Kershaw	Liberty Hill
Richards, S. M. Agri.	Kershaw	Liberty Hill
Rickenbaker, D. Eng.	Orangeburg	86 Sellars

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
Rivers, W. J. Eng.	Richland	R. No. 2, Eastover
Rodgers, H. E. Eng.	Charleston	Ravenel
Rogers, R. A. Agri.	Marion	Marion
s Rosa, J. T. Agri.	Georgetown	617 Prince
Rowell, R. C. Eng.	Bamberg	Bamberg
Rowell, W. A. Agri.	Marion	R. No. 1, Centenary
s Sanders, J. W. Agri.	Chester	R. No. 2, Richburg
Scoville, W. N. Eng.	Orangeburg	31 Doyle St.
Seegars, E. H. Eng.	Darlington	R. No. 2, Hartsville
Senn, P. H. Agri.	Newberry	Silver Street
s Shannon, C. J. Text.	Chesterfield	Jefferson
s Shealey, A. L. Agri.	Newberry	Prosperity
Shealy, W. B. Chem.	Lexington	White Rock
Sheppard, G. J. Eng.	Edgefield	R. No. 2, McCormick
Sherrill, S. S. Eng.		Charlotte, N. C., 605 N. Graham
Simmons, B. F. Agri.	Orangeburg	Rowesville
s Simpson, J. A. 2nd Agri.	Chester	Richburg
Skelton, S. E. Eng.	Pickens	Liberty
Smith, G. W. Arch.	Anderson	Townville
Smith, I. M. Agri.	Newberry	Kinards
Smith, J. M. Eng.	Anderson	Starr
Smith, M. A. Eng.	Florence	R. F. D. 1, Lake City
Smith, M. R. Agri.	Anderson	Pendleton
Smith, P. N. Eng.	Anderson	Pendleton
s Smith, W. S. Agri.	Union	Union
Smoke, A. S. Agri.	Calhoun	St. Matthews
Sprott. J. R. Eng.	Clarendon	Manning
s Stewart, R. B. 1st. Agri.	Pickens	Easley
Stewart, R. B. 2nd Eng.	Anderson	Pelzer
s Strother, J. R. Text.	Edgefield	Edgefield
s Stribling, F. D. Agri.	Spartanburg	Enoree
s Sullivan, J. D. Agri.	Laurens	Laurens
s Tarrant, L. R. Agri.	Greenwood	1135 E. Cambridge
Taylor, G. B. Agri.	Lexington	R. No. 2, Gilbert
Taylor, W. A. Arch		Dadeville, Ala.
s Teal, W. A. Agri.	Chesterfield	Middendorf
Thomas, N. G. Agri.	Orangeburg	Cope
s Thornton, R. P. Agri.	Laurens	Mountville
Thrower, J. R. Arch.	Chesterfield	Cheraw
Trescot, J. H. Eng.	Anderson	Pendleton
Trott, H. R. Arch.	Charleston	Mt. Pleasant

NOTE: s—Indicates Scholarship Student

Name and Course	County	Residence
s Trotter, A. M. Agri.	Kershaw	Camden
Tyler, G. R. Arch.	Aiken	Windsor
s Vaughn, C. L. Agri.	Darlington	Darlington
Wannamaker, H. L. Eng.	Calhoun	R. No. 1, St. Matthews
Wannamaker, W. B. Agri.	Calhoun	R. No. 2 St. Matthews
Ward, C. W. Agri.	Florence	Timmonsville
Watkins, H. B. Eng.	Anderson	Belton
Watson, D. J. Eng.	Anderson	R. No. 2, Anderson
s West, C. F. Agri.	Spartanburg	White Stone
Weston, C. T. Agri.	Richland	R. No. 1, Congaree
Whitten, F. W. Eng.	Anderson	R. No. 4, Pendleton
Williams, L. E. Eng.	Charleston	152 Spring St.
Williams, W. G. Eng.	York	Yorkville
Wood, J. T. Eng.	Greenville	Greer
s Wright, C. K. Agri.	Anderson	R. No. 1, Belton

FRESHMAN CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	School prepared at	Residence
Ackerman, M. W. Agri.	Colleton	Cottageville High	Cottageville
Agnew, E. H. Agri.		Canon High (Ga.)	Canon, Ga.
Aiken, D. W. Eng.	Abbeville	Abbeville High	Abbeville
Albrecht, C. H. Eng.	Orangeburg	Orangeburg High	Hampton St.
Allison, H. Eng.		Brevard Institute (N. C.)	Brevard, N. C.
Amme, D. A. Eng.	Charleston	Charleston High	King St.
Anderson, C. S. Eng.	Barnwell	Orangeburg College	Donora

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
s Anderson, F. C. Agri.	Abbeville	Antreville High	Antreville
Anderson, V. T. Agri.	Spartanburg	Converse St. High	Spartanburg
Andrews, N. Z. Agri.	Clarendon	Clemson Preparatory	R. No. 1, Manning
s Armstrong, F. E. Agri.	Laurens	Honea Path High	R. No. 2, Owings
Arthur, E. J. Eng.	Union	Union High	Main St.
Askins, J. P. Eng.	Darlington	Hartsville High	Hartsville
Atkins, R. S. Agri.	Greenwood	Greenwood High	R. No. 4, Greenwood
s Auld, C. U. S. Agri.	Charleston	Victory Point	Mt. Pleasant
Banks, D. H. Eng.	Calhoun	St. Matthews Graded	St. Matthews
Barnett, P. G. Agri.	Oconee	Clemson Preparatory	R. No. 4, Westminster
Barre, M. L. Eng.	Lexington	Newberry College	Lexington
Barron, W. W. Eng.	York	Ebenezer High	Rock Hill
Bass, N. B. Eng.	Williamsburg	Lanes Graded	Lanes
Baxter, E. B. Eng.	Hampton	Clemson Preparatory	Garnett
s Bell, O. R. Eng.	Lancaster	Lancaster High	Lancaster
Berry, F. O. Eng.	Greenville	9th Dist. Agric. School	River St.
Berry, J. F. Eng.	Greenville	Central High	Greenville

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
s Blackmon, J. F. Eng.	Lancaster	Lancaster High	Lancaster
Blair, J. D. Eng.	Fairfield	Lynwood	R. No. 3, Winnsboro
Blanchard, E. S. Eng.	Charleston		Moultrieville
Bonne, J. E. Agri.	Orangeburg	Rowesville High	Rowesville
Bonne, T. E. Agri.	Orangeburg	Clemson College	Rowesville
Bonner, C. N. Eng.	Spartanburg	Spartan Academy	R. No. 3, Cherokee
Boyd, P. O. Eng.	York	Fort Mill High	Fort Mill
Boylston, I. W. Eng.	Orangeburg	Springfield S. H. S.	R. No. 1, Springfield
Boylston, N. E. Agri.	Orangeburg	Springfield	R. No. 1, Springfield
Brackett, N. C. Agri.	Oconee	Clemson High	Clemson College
Braswell, J. R. Eng.	Dillon	Fork High	R. No. 1, Fork
Breazeale, B. S. Agri.	Anderson		Pendleton
Breland, W. L. Eng.	Orangeburg	Holly Hill High	R. No. 2, Holly Hill
Brockington, J. H. Agri.	Williamsburg	Clemson Preparatory	Indiantown
Brown, C. K. Eng.	Anderson		R. No. 2, Anderson
s Brown, H. F. Agri.	Cherokee	Gaffney Graded	Limestone St., Gaffney
Bunch, J. B. Eng.	Spartanburg		345 S. Church

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Name and Course	County	School prepared at	Residence
s Byers, W. V. Eng.	Orangeburg	Orangeburg High	S. Broughton
Bynum, E. G. Eng.	Richland	Eastover High	R. No. 2, Eastover
s Byrd, D. E. Eng.	Darlington	Bethlehem	Society Hill
Caldwell, A. G. Eng.	Cherokee	Blacksburg High	Blacksburg
Caldwell, M. G. Eng.	Spartanburg	Wofford Fitting	Church St.
s Camp, W. B. Agri.	Cherokee	Gaffney Graded	R. No. 3, Gaffney
Campbell, C. C. Agri.	Richland	Edgewood	R. No. 3, Columbia
Campbell, L. O. Eng.	Dorchester	Summerville High	Summerville
s Cannon, L. B. Agri.	Anderson	Honea Path High	R. No. 1, Honea Path
Carter, M. L. Agri.	Darlington	Clemson Preparatory	Timmonsville
s Carwile, A. B. Agri.	Abbeville	Private S. at Abbeville	R. No. 5, Abbeville
Cash, G. F. Eng.	Cherokee	Gaffney High	R. No. 8, Gaffney
Castles, T. G. Agri.	Fairfield	Erskine College	Winnsboro
Chapman, E. L. Agri.	Williamsburg		Johnsonville
s Chatham, F. W. Agri.	Greenwood	Ninety Six High	R. No. 2, Ninety Six
s Cheatham, R. J. Eng.	Abbeville	Warrenton	R. No. 1, Abbeville
Clark, J. D. Agri.	Lee	Lynchburg High	Lynchburg

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Colvin, J. S. Eng.	Chester	Chester High	Chester
s Connor, B. Agri.	Barnwell	Barnwell High	R. No. 1, Barnwell
Connor, F. Agri.	Orangeburg		Ferguson
Cook, J. L. Eng.	Lancaster	Clemson Preparatory	R. No. 1, Taxahaw
Cothran, J. S. Eng.	Abbeville	Abbeville High	Abbeville
Cox, J. M. Agri.	Laurens	Owings High	R. No. 2, Gray Court
Cox, M. E. Eng.	Abbeville	Abbeville High	Abbeville
Creighton, W. H. Eng.	Aiken	Shultz High	North Augusta
Cromer, C. N. Eng.	Anderson		927 W. Market
Cromer, C. W. Eng.	Anderson	Zion Graded	Townsville
s Culclasure, J. H. Agri.	Calhoun	Upper Center Hill	R. No. 1, Swansea
Cullen, C. W. Agri.	Orangeburg		Springfield
Dargan, J. F. Agri.	Darlington	Darlington Public	R. No. 3, Darlington
Davis, C. L. Eng.	Clarendon	Manning High	Manning
Davis, J. F. Agri.	Marion	Marion High	Marion
Dean, C. Eng.	Spartanburg	Hastoc	R. No. 5, Spartanburg
DeLorme, B. K. Agri.	Sumter	Furman Fitting	Sumter

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Derrick, J. S. Agri.	Saluda		R. No. 2, Batesburg
Dibble, A. C. Agri.	Orangeburg	Orangeburg High	38 E. Glover St.
s Dickson, A. M. Agri.	Darlington	Darlington Public	R. No. 2, Darlington
Doar, E. M. Agri.	Georgetown	Winyah High	R. No. 1, Georgetown
Dukes, T. E. Eng.	Orangeburg	Orangeburg High	162 S. Broughton St.
Duncan, D. T. Eng.	Greenwood	Ninety Six High	Ninety Six
DuRant, N. L. Eng.	Clarendon	Sumter High	R. No. 1, Alcolu
Earle, T. M. Eng.	Spartanburg	Hastoc High	327 S. Church St.
Easterlin, C. A. Agri.	Colleton	Walterboro High	Round
Eleazer, J. M. Agri.	Richland	Spring Hill	Chapin
Ellis, A. Agri.	Abbeville	Clemson Preparatory	R. No. 5, Abbeville
Fain, P. Eng.			Murphy, N. C.
Fairey, R. H. Eng.	Orangeburg	Orangeburg High	108 S. Broughton St.
Fant, M. Agri.	Anderson	Watkins High	E. River St.
Faris, J. C. Agri.	York		R. No. 1, Rock Hill
Farnum, C. O. Agri.	Orangeburg	Orangeburg High	R. No. 1, Jamison
Ferguson, J. G. Agri.	Chester	Richburg	R. No. 1, Basconville

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
s Ferguson, T. M. Agri.	York	Bethany	R. No. 1, Clover
s Foster, G. R. Agri.	Spartanburg	Roebuck	Roebuck
Freeman, T. Agri.	Anderson	Princeton	R. No. 4, Honea Path
Fulmer, J. W. Eng.	Lexington	Chapin	R. No. 1, Chapin
Funk, L. W. Eng.	Darlington	Florence High	Darlington
Flourney, J. E. Agri.		Lanier High	R. No. 1, Macon, Ga.
s Garris, J. M. Agri.	Colleton	Hall S.	R. No. 1, Round
Garrison, E. H. Agri.	York	Ebenezer Graded	R. No. 4, Rock Hill
Glenn, R. H. Agri.	York	Yorkville High	Yorkville
Glenn, T. L. Agri.	York	Yorkville High	Yorkville
Gilliam, J. W. Agri.	Abbeville	Sharon High	R. No. 3, Abbeville
Green, L. P. Agri.	Anderson	Watkin's Private	R. No. 2, Anderson
s Green, M. C. Agri.	Greenville	Furman Fitting	Greenville
Green, W. F. Agri.	Anderson	Watkin's Private	R. No. 2, Anderson
Going, H. R. Eng.	Union	Union High	Main St.
s Haddon, F. M. Agri.	Greenwood	Cokesbury	R. No. 3, Hodges
Haigler, S. W. Agri.	Calhoun	Cameron High	R. No. 1, Cameron

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Name and Course	County	School prepared at	Residence
s Hamlin, J. C. Agri.	Anderson	Watkin's Private	228 W. Franklin St.
Harmon, G. D. Eng.	Richland	Hyatt Park High	1725 Main St., Columbia
Harrall, J. P. Eng.	Chesterfield	Cheraw Public	Cheraw
Harris, J. J. Agri.	Anderson	Pendleton High	Pendleton
Harris, M. H. Eng.	Laurens		R. No. 1, Gray Court
Harrison, B. W. Agri.	Oconee	Walhalla High	Walhalla
s Heiss, G. Agri.	Marlboro	Porter Military Academy	Clio
Heldman, J. M. Eng.	Spartanburg	Wofford Fitting	318 Pine St.
Hellams, R. B. Agri.	Greenville		411 College St.
Henderson, J. R. Agri.	Charleston		14 Broad St.
Hester, S. M. Agri.	Pickens	Vineland	R. No. 2, Easley
Holland, J. G. Eng.	Greenwood	Ninety Six High	R. No. 1, Ninety Six
Holliday, F. G. Agri.	Horry		Gallivants Ferry
Hollowell, J. W. Eng.	Richland	Columbia High	6 Gibbes Court, Columbia
Hood, S. C. Eng.	Orangeburg		170 E. Russell St.
Howell, V. M. Agri.	Dorchester	St. George High	St. George
Howle, A. J. Agri.	Darlington	Clemson Preparatory	R. No. 1, Society Hill

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NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Hunt, H. F. Agri.	Oconee	Townville	R. No. 3, Townville
Hydrick, G. B. Agri.	Orangeburg	Wofford Fitting	R. No. 1, North
Hyman, W. H. Agri.	Florence		Hyman
Inabinet, M. A. Eng.	Calhoun	St. Matthews High	R. No. 1, St. Matthews
s Jackson, B. B. Agri.	Sumter	Bethel High	R. No. 2, Sumter
Jackson, J. M. Eng.	Marlboro	Murchison High	Bennettsville
Jeffords, R. L. Eng.	Darlington	Darlington Graded	250 W. Broad
Jeffries, W. N. Agri.	Cherokee	Asbury	R. No. 1, Pacolet
Jenkins, G. M. Eng.	Charleston	Porter Military Academy	Adams Run
Jennings, R. H. Eng.	Orangeburg	Porter Military Academy	15 Whitman
Jeter, J. P. Eng.	Union		Santuc
Johnson, A. T. Agri.	Saluda		Fruit Hill
Johnson, M. T. Eng.	Union	Mt. Tabor	Mt. Tabor
Johnston, W. E. Agri.	Dorchester	St. George High	St. George
Jones, A. C. Eng.	Sumter	Sumter High	R. No. 3, Sumter
Jones, W. D. Agri.	Spartanburg	Spartan Academy	R. No. 4, Campobello
Kee, J. S. Agri.	Chester	Pleasant Grove	R. No. 1, Rodman

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
s Kendrick, J. B. Agri.	York	Bethel Rural	R. No. 2, Clover
Kennedy, J. L. Eng.	Abbeville	Clemson Preparatory	McCormick
Kirven, C. L. Agri.	Darlington	Darlington Public	Darlington
s Kyzer, E. D. Agri.	Lexington	Red Knoll	R. No. 2, Lexington
Laidlaw, R. E. Agri.		Clemson Preparatory	Marion, N. C.
Lawton, B. E. Eng.	Hampton		Garnett
Leland, A. M. Agri.	Charleston	McClellanville High	McClellanville
Lemmon, D. G. Agri.	Lee	Clemson Preparatory	R. No. 1, Elliott
Leslie, W. E. Agri.	Abbeville	Kennedy's Private	Abbeville
s Lewis, J. J. Agri.	Horry	Sandy Plain	R. No. 2, Gallivants Ferry
Liles, J. F. Eng.	Marlboro		R. No. 4, Bennettsville
s Littlejohn, C. E. Agri.	Union	Jonesville High	Jonesville
Livingston, A. H. Eng.	Orangeburg	Clemson Preparatory	R. No. 2, North
Loadholt, J. T. Eng.	Barnwell		Fairfax
Lowery, T. M. Eng.	Oconee	Seneca High	Seneca
s Lyles, N. P. Agri.	Lexington	Leesville College	R. No. 1, Steedman
s Major, C. S. Agri.	Anderson	Watkin's Private	R. No. 6, Anderson

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NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Mallard, J. T. Eng.	Greenville	Greenville High	1207 Pendleton
Mallory, W. W. Agri.		Savannah High	425 Bull St., Savannah, Ga.
Martin, P. A. Eng.	Oconee	Oakway High	R. No. 2, Westminster
Mather, E. W. Agri.	Charleston	Glenn Ridge High	92 Broad St.
May, L. A. Eng.	Richland	Columbia High	1313 Sumter St., Columbia
s McConnell, R. M. Eng.	Williamsburg	Kingstree High	Kingstree
s McCord, A. S. Agri.	Greenwood	McCords	Hodges
McDaniel, C. T. Eng.	Anderson	Clemson Preparatory	R. No. 1, Anderson
McDermid, G. C. Agri.	Charleston		218 Rutledge Ave.
McElveen, A. V. Agri.	Lee	Lynchburg	Lynchburg
McFadden, W. N. Agri.	Chester	Oakley Hall	R. No. 1, Lewis Turn Out
McKie, J. G. Eng.	Edgefield		Meriwether
McKinney, S. J. Eng.	Greenville		Hampton Ave.
McLaurin, J. R. Agri.	Dillon	Clemson Preparatory	R. No. 3, Latta
s McMahan, W. E. Agri.	Oconee	Seneca High	R. No. 1, Seneca
s Mellett, R. R. Agri.	Sumter	Bethel	R. No. 2, Sumter
Miley, C. H. Agri.	Hampton		R. No. 1, Brunson

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Miller, J. L. Agri.	Chester	Wellridge	R. No. 1, Cornwell
Mims, S. L. Agri.	Clarendon	Clemson Preparatory	Pinewood
Moore, J. H. Agri.	Florence	Presbyterial High	R. No. 1, Mars Bluff
Moore, T. P. Eng.	York	Yorkville High	Yorkville
Morris, C. Agri.	Bamberg	Olar High	Olar
Morrison, W. A. Agri.	Oconee	Clemson College High	Clemson College
Myers, F. O. Agri.	Orangeburg	Orangeburg High	41 Windsor St.
Neil, W. H. Eng.	Beaufort	Pacific Public	Chisholm
Nelson, P. B. Eng.	Clarendon	Manning High	R. No. 1, Manning
Nicholson, W. W. Eng.	Fairfield	Woodward	Woodward
Nolen, C. J. Agri.	Spartanburg		R. No. 2, Spartanburg
Nowell, A. E. Eng.	Charleston	Charleston High	324 Meeting St.
O'Dell, D. G. Agri.	Pickens	Liberty Graded	Liberty
Odom, R. J. Eng.	Marlboro	McColl High	McColl
Oliver, R. S. Eng.	Dillon		Hamer
O'Neal, R. M. Agri.	Anderson	Pendleton	R. No. 4, Pendleton
Owens, E. R. Eng.	Greenville	Greenville High	214 Brooks Ave.

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Padgett, T. D. Agri.		Round Hill High	Union Mill, N. C.
Page, L. A. Agri.	Marlboro	Forby Union Military Academy	R. No. 1, Brownsville
Parker, J. E. Agri.	Aiken	Graniteville Academy	Graniteville
Patillo, U. S. Eng.	Aiken	Paul Haines	North Augusta
Patjens, A. A. Eng.	Charleston		Mt. Pleasant
Patjens, H. K. Eng.	Charleston	College of Charleston	Mt. Pleasant
s Patrick, W. T. Agri.	Orangeburg	Bowman High	R. No. 4, Bowman
Pettigrew, W. F. Agri.	Florence	Presbyterial High	10 E. Pine
Phinney, G. L. Eng.	Oconee	Wofford Fitting	West Union
Pickens, W. A. Eng.	Anderson	Airy Springs High	R. No. 4, Easley
Pitts, P. M. Eng.	Sumter		R. No. 3, Sumter
Poe, T. M. Eng.	Greenville	Clemson Preparatory	150 James
s Poole, R. F. Agri.	Laurens	Barksdale	R. No. 3, Gray Court
Poulnot, J. M. Eng.	Charleston	Charleston High	117 Rutledge Ave.
Price, E. L. Eng.	Bamberg	Bamberg High	Bamberg
Prince, G. E. Agri.	Greenville	Easley High	224 Whitner St.
Prothro, L. C. Eng.	Aiken	Aiken Institute	Aiken

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Pruitt, A. R. Eng.	Anderson	Anderson High	320 W. Franklin St.
Quattlebaum, H. H. Agri.	Aiken	Aiken Institute	Aiken
Ragsdale, R. E. Eng.	Anderson	Williamston High	Pelzer
Ramsay, S. I. Eng.	Greenville	Central High	732 E. Washington
Reaves, R. H. Agri.	Clarendon	Sumter High	R. No. 2, Alcolu
Reid, A. M. Agri.	Abbeville	Clemson Preparatory	Abbeville
Rhoad, J. St. C. Eng.	Bamberg	Carlisle Fitting	R. No. 2, Branchville
Richbourg, J. W. Eng.		Richmond Academy	310 7th St., Augusta, Ga.
s Richter, J. C. Agri.	Greenwood	Greenwood High	110 New Market
s Roberts, S. L. Agri.	Dillon		R. No. 3, Latta
Rosa, D. D. Eng.	Georgetown		617 Prince
Ross, W. E. Agri.	Pickens	Cornell University	Clemson College
Russell, J. A. Eng.	Anderson		Autun
Sanders, H. H. Eng.	Sumter	Raftin Creek High	Hagood
Schroeder, J. N. Agri.	Charleston		157 Rutledge Ave.
Scoville, E. N. Eng.	Orangeburg	Orangeburg City	31 Doyle St.
Seabrook, T. B. Eng.	Charleston	Porter Military Academy	Amensdam

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NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Seybt, H. B. Eng.	Anderson	Anderson High	317 N. Main
Sharp, W. B., Eng.	Abbeville		Mt. Carmel
s Sherer, W. A., Agri.	Anderson	Watkins Private	506 Marshall Ave.
s Shields, H. L. B. Agri.	Spartanburg	Spartanburg High	R. No. 1, Cherokee
Shiver, H. E. Agri.	Oconee		Clemson College
Siddall, T. H. Eng.	Sumter	Sumter High	18 Harby St.
s Simpson, D. M. Eng.	Anderson	Honea Path High	N. Main St., Honea Path
Sitton, J. J. 1st. Agri.	Anderson	Clemson Preparatory	R. No. 4, Easley
Sitton, J. J. 2nd., Eng.	Anderson	Clemson Preparatory	Pendleton
Sloan, A. H. Eng.	Pickens	Clemson College High	Clemson College
Smith, H. W. Eng.	Colleton	Cottageville High	Cottageville
s Smith, W. C. Agri.	Barnwell	Williston High	Williston
s Sowell, H. E. Agri.	Lancaster	Lancaster High	Lancaster
Sprott, J. Agri.	Greenwood	Cross Hill High	R. F. D. Greenwood
s Stevens, J. G. Agri.	Berkeley	Pinopolis High	R. No. 1, Moncks Corner
Stribling, J. W. Agri.	Oconee	Seneca High	Seneca
Stribling, S. C. Agri.	Oconee	Richland High	Richland

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Stuckey, J. E. Agri.	Lee	S. C. M. A.	Bishopville
Suggs, H. L. Eng.	York	Central Academy	Yorkville
Talley, J. C. Eng.	Greenville	Travellers Rest High	Travellers Rest
Tate, T. H. Eng.		Round Hill High	R. No. 2, Union Mills, N. C.
s Thompson, L. P. Agri.	Anderson	Hopewell	R. No. 1, Anderson
s Thornton, S. F. Agri.	Laurens	Mountville High	Mountville
Tison, J. A. Agri.	Barnwell	Allendale High	Allendale
Townsend, W. B. Eng.	Marlboro	Murchison High	Bennettsville
Tribble, R. M. Eng.	Oconee	Seneca High	Seneca
Turbeville, J. E. Eng.	Clarendon		R. No. 1, Turbeville
Tuten, L. B. Eng.	Hampton	Brunson High	Brunson
s Usher, P. A. Agri.	Marlboro	Brightsville High	R. F. D. No. 2, Gibson, N. C.
Verner, L. W. Eng.	Oconee	Seneca High	Seneca
Vincent, C. A. Agri.	Florence	Porter Military Academy	R. No. 1, Mars Bluff
Walker, C. L. Eng.	Richland	Hyatt Park High	1332 Gervais St., Columbia
Wallace, D. R. Eng.	Newberry	Belfast	R. No. 1, Kinards
Wannamaker, H. C. Eng.	Orangeburg	Orangeburg	61 Glover St.

NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
s Wardlaw, F. H. Eng.	Abbeville	Bethel	R. No. 4, Abbeville
Warner, H. T. Agri.	Greenwood	Clemson Preparatory	R. No. 2, Greenwood
s Washington, P. M. Agri.	Laurens	N. Greenville Academy	R. No. 1, Ware Shoals
Watkins, H. S. Eng.	Anderson	Anderson High	244 Calhoun
Webb, C. W. Agri.	Anderson	Anderson High	207 W. Franklin
Webb, St. C. Eng.	Anderson		701 S. McDuffie St.
West, C. T. Agri.	Oconee	Clemson Preparatory	Clemson College
West, W. D. Eng.	Greenville	S. C. M. A.	Greenville
Williams, B. N. Agri.	Greenwood		Gaines
White, J. K. Eng.	Edgefield	Clemson Preparatory	R. No. 2, McCormick
Whitten, W. C. Agri.	Anderson	Clemson College High	R. No. 4, Pendleton
Wilkes, T. F. Eng.	Chester	Clemson Preparatory	R. No. 2, Chester
Williams, K. A. Agri.	York	Yorkville High	Yorkville
Williams, W. R. Eng.	Kershaw	Camden High	1803 3rd Ave., Camden
Williamson, R. E. Agri.	Darlington	Darlington Public	R. No. 3, Darlington
Williamson, S. Eng.	Lancaster	Lancaster Graded	Lancaster
Winters, D. M. Eng.	Berkeley	Longridge	R. No. 1, Monks Corner

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NOTE: s—Indicates Scholarship Student

Name and Course	County	School prepared at	Residence
Winters, E. S. Agri.	Darlington		Society Hill
s Wise, J. R. Agri.	Saluda	Saluda High	Saluda
Witherspoon, S. M. Agri.	Clarendon	Clemson Preparatory	R. No. 2, Mayesville
Witherspoon, T. C. Agri.	Anderson	Clemson Preparatory	R. No. 5, Anderson
Woods, E. T. Eng.	Lexington	Columbia High	R. No. 3, Lexington
Woodward, J. L. Agri.	Aiken	Aiken Institute	Park Ave.
Wright, R. D. Eng.	Newberry	Wofford Fitting	1710 College St.
s Wright, R. F. Eng.	Newberry	Newberry High	1901 Harrington Ave.
Wright, W. F. Eng.	Laurens	Sandy Springs High	R. No. 3, Laurens
Wyat, E. F. Agri.	Anderson	Clemson Preparatory	R. No. 4, Easley
s Young, E. C. Agri.	Laurens	Clinton High	R. No. 2, Clinton

PREPARATORY CLASS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Allsbrook, J. G.	Horry	Sanford
Aull,, W. H.	Anderson	Pendleton
Baldwin, H. L.	Union	Mt. Tabor
Blanton, P. M.	Horry	Greensea
Boykin, A. D.	Kershaw	R. No. 1, Lugoff
Boylston, R. P.	Aiken	Wagener
Brandon, T. B.	York	R. No. 1, McConnellsville
Britt, J. B.	Abbeville	McCormick
Brown, E. C.	Newberry	R. No. 2, Newberry

NOTE: s—Indicates Scholarship Student

Name	County	Residence
Burns, G. M.	Anderson	R. No. 4, Anderson
Cherry, T. J.	Oconee	Seneca
Crowther, J. H.	Abbeville	Antreville
Davis, F. A.	Lee	R. No. 5, Camden
Derham, J. P.	Horry	Greensea
Emanuel, K. P.	Sumter	Borden
Emanuel, L. T.	Sumter	Borden
Ferguson, J. M.	Chester	R. No. 3, Chester
Garrison, E. W.	Anderson	Sandy Springs
Garrison, W. H.	Anderson	Denver
Goudelock, W. J.	Cherokee	S. Limestone, Gaffney
Hammond, G. B.	Aiken	Kathwood
Hankinson, J. C.	Aiken	R. No. 1, Windsor
Harris, J. D., Jr.	Greenville	R. No. 6, Greenville
Hill, G. L.	Florence	R. No. 1, Effingham
Hiott, G. F.	Colleton	R. No. 1, Round
Holmes, C.	Edgefield	R. No. 2, Johnston
Holmes, J. R.	Orangeburg	R. No. 5, Orangeburg
Holmes, L. F.	Edgefield	R. No. 2, Johnston
Hunt, W. C.	Oconee	R. No. 3, Townsville
Jennings, O. R.	Orangeburg	No. 1, Cordova
Jones, J. P.	Fairfield	Longtown
Kennedy, W. P.	Greenwood	R. No. 2, Troy
Kirkley, J. A.	Kershaw	R. No. 4, Kershaw
Lanham, G. F.	Edgefield	R. No. 2, Edgefield
Lewis, R.	Oconee	Clemson College
McDonald, C.	Dillon	R. No. 1, Hamer
McIntosh, H. E.	Clarendon	R. No. 1, New Zion
McIntyre, J. E.	Kershaw	R. No. 1, Lugoff
Mears, J. F.	Colleton	R. No. 1, Islandton
Middleton, J. A.	Laurens	Clemson College
Montgomery, J. H.	Clarendon	R. No. 2, Mayesville
Morrah, U. W.	Abbeville	R. No. 1, Willington
Nabors, R. C.	Laurens	R. No. 2, Clinton
Odom, A. T.	Marlboro	R. No. 2, Gibson, N. C.
O'Hagan, V. B.	Charleston	171 Meeting St.
Padgett, H. I.	Colleton	R. No. 2, Smoaks
Powe, R. W.	Darlington	R. No. 1, Hartsville
Rhett, W. P.	Dorchester	Summerville
Rhinehart, E. C.	Saluda	R. No. 6, Leesville
Risher, P. W.	Colleton	R. No. 1, Smoaks

Name	County	Residence
Rugheimer, A. H.	Charleston	169 King St
Sandifer, T. N.	Richland	1225 Bull, Columbia
Sanders, H. L.	Sumter	Hagood
Smith, L. H.	Georgetown	Laurel
Solomons, S. R.	Jasper	R. No. 1, Ridgeland
Steele, J. H.	York	R. No. 4, Rock Hill
Truluck, G. M.	Lee	Lynchburg
Tuten, E. J.	Hampton	R. No. 1, Hampton
Vaughan, G. F.	Union	Adamsburg
Vaughan, W. E.	Darlington	R. No. 2, Timmonsville
Wall, C. D.	Spartanburg	R. No. 2, Spartanburg
Watkins, J. M.	Newberry	R. No. 1, Chappells
Weaver, E.	Darlington	R. No. 2, Timmonsville
Webb, G. R.	Saluda	R. No. 2, Chappells
Webb, J. S.	Saluda	Chappells
White, P. D.	York	Yorkville
Willoughby, W. J.	Florence	R. No. 1 Scranton
Wilson, J. L.	Chester	Loweryville
Woodberry, D. L.	Williamsburg	Johnsonville
Worley, S.	Horry	R. No. 2, Nichols

ONE YEAR COURSE IN AGRICULTURE

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

s Aiken, B. W.	Anderson	R. No. 1, Piedmont
Anderson, J. B.	Florence	Timmonsville
s Beasley, L.	Lee	R. No. 5, Bishopville
s Bell, H. G.	Kershaw	R. No. 1, Lugoff
s Blankenship, B. C.	York	R. No. 1, Fort Mill
Burnett, D. P.	Saluda	R. No. 1, Dison
Cain, F. M.	Sumter	R. No. 2, Sumter
s Calhoun, J. A.	Greenwood	R. No. 1, Ninety Six
s Cantrell, O. F.	Oconee	R. No. 2, Walhalla
Carwile, R. H.	Abbeville	R. No. 5, Abbeville
s Cason, J. M.	Anderson	R. No. 1, Piedmont
s Causey, C. E.	Hampton	Furman
s Charles, J. H.	Union	Union
s Coleman, C. H.	Fairfield	R. No. 2, Blairs
s Coleman, P. G.	Saluda	R. No. 1, Silver Street
s Cooke, R. C.	Horry	R. No. 5, Jordanville
Coward, A. C.	Chesterfield	R. No. 3, Chesterfield

NOTE: s—Indicates Scholarship Student

Name	County	Residence
s Creech, J. F.	Barnwell	R. No. 1, Barnwell
s Derrick, R. H.	Lexington	R. No. 3, Columbia
s Faucett, B. G.	Union	R. No. 4, Union
s Ferguson, W. H.	Chester	R. No. 3, Chester
s Fogle, G. H.	Dorchester	Ridgeville
s Foster, E. A.	Greenville	R. No. 3, Piedmont
Foster, S. W.	Spartanburg	R. No. 1, Roebuck
Fowke, L. C.	Barnwell	Baldock
Franklin, J.	Abbeville	R. No. 1, Willington
Gandy, M.	Darlington	Dovesville
Gasque, W. E.	Marion	Marion
Haigler, A. L.	Calhoun	R. No. 1, Cameron
s Harrison, J. Z.	Colleton	R. No. 2, Smoaks
Hendricks, C. M.	Pickens	R. No. 1, Calhoun
s Hendrix, W. H.	Lancaster	R. No. 1, Heath Springs
Holmes, W. H.	Charleston	Mt. Pleasant
s Jeter, W. T.	Union	R. No. 1, Carlisle
s Jordan, A. L.	Darlington	Darlington
Ketchin, W. W.	Fairfield	Winnsboro
Kirven, N. W.	Darlington	Darlington
Leonard, R. R.	Laurens	R. No. 4, Fountain Inn
Long, S. C.	Newberry	R. No. 3, Prosperity
s Lucas, H. R.	Berkeley	Pinopolis
s Mathis, N. Y.	Lee	R. No. 1, St. Charles
s McInness, P. W.	Darlington	R. No. 3, Darlington
s McKinzie, C. L.	Jasper	R. No. 2, Pineland
s Mims, J. F.	Clarendon	R. No. 1, Manning
Owens, J. I.	Marion	Marion
s Pollard, J. W.	Spartanburg	R. No. 3, Spartanburg
s Rivers, J. H.	Chesterfield	R. No. 1, Chesterfield
Sanders, B.	Sumter	R. No. 1, Dalzell
s Seawright, C.	Abbeville	Donalds
Siegler, G. P.	Aiken	Eureka
s Smith, T. C.	Marion	R. No. 1, Mullins
s Stroman, P.	Orangeburg	R. No. 1, Springfield
Stuckey, L.	Sumter	R. No. 1, Dalzell
s Thomas, L. P.	Pickens	R. No. 2, Dacusville
s Timmerman, J. P.	Aiken	Trenton
s Townsend, L.	Marlboro	R. No. 4, Bennettsville
s Westbury, J. A.	Dorchester	R. No. 2, St. George
Williamson, J. V.	Marion	R. No. 3, Mullins
Zenker, H. M.	York	R. No. 1, Rock Hill

NOTE: s—Indicates Scholarship Student

SPECIAL AND IRREGULAR STUDENTS

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name and Course	County	Residence
Bailie, R. C. Eng.		1108 Telfair St., Augusta, Ga.
Blackwell, F. Y. Eng.	Marion	Marion
Boggs, J. K. Eng.	Pickens	Liberty
Boyd, J. T. Agri.	Chester	Cornwell
Carpenter, P. M. Agri.	Greenwood	R. No. 2, Marietta
Carson, A. B. Eng.	Saluda	Saluda
Carter, J. C. Eng.		Gainesville, Ga.
Folger, D. F. Eng.	Pickens	Central
Glover, J. E., Jr. Eng.	Orangeburg	16 Doyle St.
Grant, H. L. Eng.	Richland	Columbia
Grimshawe, T. D. Eng.	Oconee	Jocasse
Nigels, F. E. Eng.	Sumter	Sumter
Pearson, J. F. Eng.	Orangeburg	R. No. 2, Orangeburg
Randle, E. L. Eng.	Sumter	Sumter
Robertson, F. H. Eng.	Charleston	27 Montague
Swinehart, D. E. Eng.		LasCascadas, Panama

SPECIAL TEXTILE STUDENTS

Name	County	Residence
Ashmore, C. J.	Greenville	R. No. 1, Princeton
Lewis, H. C.	Pickens	Pickens
Riser, W. E.	Saluda	Leesville
Robison, J. A.	Greenville	Greer
Suttles, T.	Greenville	29 Smyth St.

FARMER'S SHORT COURSE IN AGRICULTURE

Name	County	Residence
Boyce, J. M.	York	Rock Hill
Breland, A. L.	Orangeburg	R. No. 2, Vance
Burgess, J. H.	Clarendon	Summerton
Crawford, W. T.	Abbeville	Due West
Gaillard, A. P., Jr.	Greenwood	R. No. 2, Ninety Six
Jonas, D. L.	York	Yorkville
Lee, F.	Greenville	Piedmont
Lester, J. A.	Newberry	Silver Street
Major, W. P.	Greenville	R. No. 1, Piedmont
Rhodes, H. D.	Barnwell	Meyers Mill
Seigler, Y. E.	Greenwood	R. No. 2, McCormick

Name	County	Residence
Smith, D. N.	Orangeburg	42 College Ave.
Snipes, H.	Anderson	R. No. 3, Anderson
Wertz, J. D.	Saluda	R. No. 5, Prosperity
White, M. C.	Edgefield	R. No. 2, McCormick

WORK BOY COURSE.

(Where the names of the County and City are the same the name of the City is not repeated, only the street address is given.)

Name	County	Residence
Adams, J. T.	———	———
Bull, C. N.	Greenville	R. No. 5, Greenville
Boazman, G. E.	Laurens	R. No. 1, Cross Hill
Cotton, J. L.	Richland	R. No. ?, Eastover
Craig, H. C.	Greenwood	Reynolds St.
Dupre, J. S.	Oconee	R. No. 1, Walhalla
Eagerton, B.	Dorchester	R. No. 1, Ridgeville
Greene, E. B.	Florence	R. No. 4, Timmonsville
Harrilson, J.	Horry	R. No. 2, Nichols
Hudson, W. O.	Chester	Bascomville
Reed, C. C.	Anderson	R. No. 7, Anderson
Wolfe, W. F.	Calhoun	R. No. 1, Swansea

GENERAL SUMMARY OF STUDENTS

By Classes and Courses

CLASS	Agricultural Courses				Engineering Courses			Textile Industry	Arch. Eng.	Chem. & Geol.	GRAND TOTALS
	Agriculture I	Agriculture II	Agriculture III	TOTAL	Mech. & Elec. Eng.	Civil Eng.	TOTAL				
Senior	7	15	14	36	20	9	29	11			76
Junior	21	10	12	43	34	7	41	6			90
Sophomore*				100			80	9	10	2	201
Freshman**				152			138				290
Spec. & Irreg.				2			14	5			21
One Year				59							59
Work Boy				12							12
Preparatory											70
Four Weeks				15							15
TOTALS				418			302	31	10	2	834

* Sophomores are not classified in Agriculture and Engineering.

** Freshmen are classified only as Agriculture and Engineering.

SUMMARY OF STUDENTS

By Counties in South Carolina

Abbeville	31
Aiken	17
Anderson	69
Bamberg	8
Barnwell	14
Beaufort	3
Berkeley	5
Calhoun	15
Charleston	44
Cherokee	9
Chester	20
Chesterfield	7
Clarendon	18
Colleton	12
Darlington	30
Dillon	7
Dorchester	11
Edgefield	13
Fairfield	12
Florence	19
Georgetown	10
Greenville	37
Greenwood	24
Hampton	11
Horry	8
Jasper	2
Kershaw	9
Lancaster	10
Laurens	20
Lee	11
Lexington	15
Marion	14
Marlboro	13
Newberry	17
Oconee	31
Orangeburg	45
Pickens	21
Richland	22
Saluda	13
Spartanburg	41
Sumter	22

Union	20
Williamsburg	7
York	34
Total South Carolina	820

By States

South Carolina	820
North Carolina	4
Kentucky	1
Georgia	4
New York	1
Nebraska	1
Panama	1
Alabama	1
Florida	1
Total	834

In addition to the above 832 there were 32 other young men to matriculate, but were not permitted to enter college on account of insufficient preparation. This would give the total number of MATRICULATES 864

17485

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